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ABSTRACT

This third "Innocenti Report Card" presents the most up-to-date and comprehensive survey so far of teenage birth rates in the industrialized world. And it attempts at least a partial analysis of why some countries have teenage birth rates that are ten or even fifteen times higher than others. The starting point is a new league table of teenage birth rates, showing the number of births per 1,000 15 to 19-year-olds in the Organisation for Economic Co-operation and Development (OECD) nations under review. Additional figures show how those rates have changed over the last 30 years. Data reveals that the five countries with the lowest teenage birth rates are Korea, Japan, Switzerland, the Netherlands, and Sweden-- all with teen birth rates of fewer than 7 per 1,000. The United States teenage birth rate of 52.1 is the highest in the developed world-- and about four times the European Union average. As a contribution to the debate, this report draws on international experience and comparison to establish current facts and trends, to identify some of the forces that offer young people both motive and means to delay childbearing, and to look at what might be learnt from those societies that have already succeeded in reducing the problem. (Contains 44 references.) (GCP)

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INNOCENTI REPORT CARD
ISSUE No.3 JULY 2001

A LEAGUE TABLE OF

TEENAGE

BIRTHS

IN RICH

NATIONS

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This publication is the third in a series of *Innocenti Report Cards*, designed to monitor the performance of the industrialized nations in meeting the needs of their children. Each *Report Card* presents and analyses league tables ranking the performance of rich nations against critical indicators of child well-being.

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"In the world's rich nations,

more than three quarters of a million

teenagers will become mothers in the

next twelve months."

Key findings

- At least 1.25 million teenagers become pregnant each year in the 28 OECD nations under review. Of those, approximately half a million will seek an abortion and approximately three quarters of a million will become teenage mothers.

- The five countries with the lowest teenage birth rates are Korea, Japan, Switzerland, the Netherlands and Sweden – all with teen birth rates of fewer than 7 per 1,000.

- The United States teenage birth rate of 52.1 is the highest in the developed world – and about four times the European Union average.

- The United Kingdom has the highest teenage birth rate in Europe.

- In 10 out of 12 developed nations with available data, more than two thirds of young people have sexual intercourse while still in their teens. In Denmark, Finland, Germany, Iceland, Norway, the United Kingdom and the United States, the proportion is over 80 per cent. In Australia, the United Kingdom and the United States, approximately 25 per cent of 15 year-olds and 50 per cent of 17 year-olds have had sex (Figure 10).

- Rising levels of education, more career choice for women, more effective contraception, and changing preferences, have increased the average age at first birth in all developed countries. In 19 of the 28 nations under review, births to teenagers have more than halved in 30 years (Figure 8).

- The relationship between teenage birth rates and overall birth rates varies considerably from country to country, suggesting that national differences in teenage birth rates are in large part caused by factors that affect teenagers in particular (Box 3).

- Giving birth while still a teenager is strongly associated with disadvantage in later life. On average across 13 countries of the European Union, women who gave birth as teenagers are twice as likely to be living in poverty (Figure 5).

- Reducing teenage births offers an opportunity to reduce the likelihood of poverty, and of its perpetuation from one generation to the next.

Introduction

This third *Innocenti Report Card* presents the most up-to-date and comprehensive survey so far of teenage birth rates in the industrialized world. And it attempts at least a partial analysis of why some countries have teenage birth rates that are ten or even fifteen times higher than others.

The starting point is a new league table of teenage birth rates (Figure 1), showing the number of births per 1,000 15 to 19 year-olds in the 28 OECD nations under review. Figure 8 shows how those rates have changed over the last 30 years. Figure 3 presents a league table of birth rates among teenagers aged 15 to 17.

But why should teenage birth rates be a matter of such concern? Physiologically, 18 or 19 is a better age to begin childbearing than 35 (fast becoming a popular age for a first baby in the developed world). And the number of births to teenagers is, in any case, falling steeply across the industrialized world. So why worry?

The answer of course is that teenage births are today seen as a problem. And they are seen as a problem because they are strongly associated with a range of disadvantages for the mother, for her child, for society in general, and for taxpayers in particular.

Specifically, giving birth as a teenager is believed to be bad for the young mother because the statistics suggest that she is more likely to drop out of school, to have no or low qualifications, to be unemployed or low-paid, to live in poor housing conditions, to suffer from depression, and to live on welfare. Similarly, the child of a teenage mother is more likely to live in poverty, to grow up without a father, to become a victim of neglect or abuse, to do less well at school, to become involved in crime, to abuse drugs and alcohol, and eventually to become a teenage parent and begin the cycle all over again.

Unsurprisingly, therefore, teenage births are also seen as a burden for the society that must cope with this long list of negatives. That is why the issue attracts so much popular and political interest; and that is why 15 out of the 28 countries featured in this review are trying to do something about it.

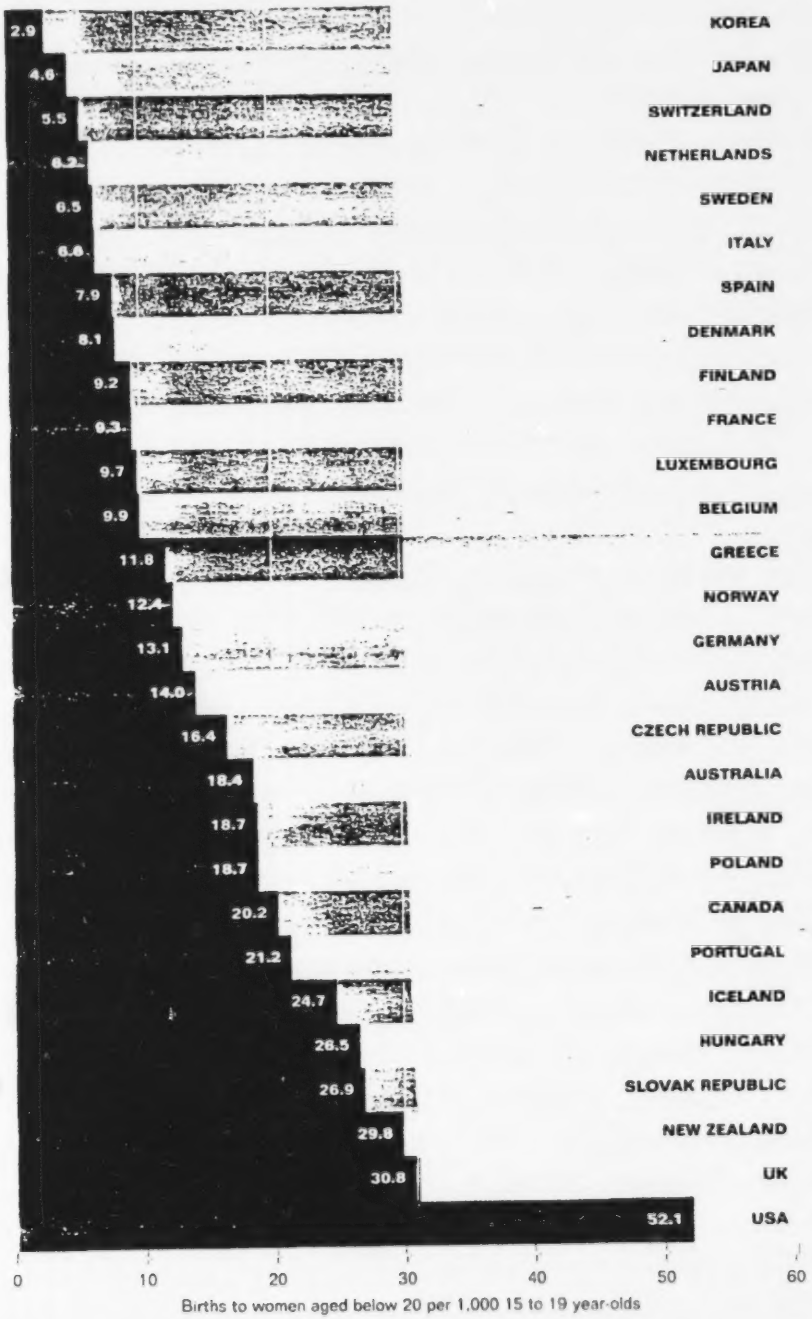
How teenage births might be reduced is a question to which everyone seems to have his or her favourite answer: more sex education or less sex education; abstinence education or free contraceptives in schools; dispensing 'morning after' pills or capping welfare benefits. And it is a debate which is occasionally given a stir in the opposite direction by a teenage mother wishing to point out that having a baby at 18 did not ruin her own or her child's life, and that her struggles and achievements ought not to be categorised as feckless and irresponsible behaviour.

As a contribution to the debate, this *Report Card* draws on international experience and comparison to establish current facts and trends, to identify some of the forces that offer young people both motive and means to delay childbearing, and to look at what might be learnt from those societies which have already succeeded in reducing the problem to unprecedentedly low levels. For although teenage birth rates are the result of a complex pattern of forces that differ considerably from nation to nation, a glance at the teenage birth league (Figure 1) clearly shows that this is a problem that some countries have brought under control and others have not. □

The teenage birth league

Figure 1

The table shows the number of births to women aged below 20 per 1,000 women aged 15 to 19 (details of the data are given on page 27). Data are for 1998, the most recent year for which comparable information is available from all countries.



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Commentary

The league table on the left (Figure 1) presents the latest internationally comparable data on teenage birth rates for the nations of the OECD.

Even at first glance, it reveals very wide differences between the 28 developed nations listed. Overall, the proportion of young women aged 15 to 19 who give birth each year varies from under 3 per 1,000 in Korea to more than 50 per 1,000 in the United States. Expressed another way, the percentage of 20 year-old women who have already given birth ranges from 2 per cent to 22 per cent (Figure 2).

In absolute numbers, each year sees approximately 760,000 births to teenagers in the countries under review. Two thirds of that total is accounted for by the United States and three quarters by the six anglophone countries, all of which are in the bottom half of the league table.

Figure 3 breaks the league table down into younger and older teenagers; and it shows that in the top half of the table births to younger teenagers are a very small proportion of all teenage births. In the bottom half, however, births to 15 to 17 year-olds make up a considerably higher proportion of the overall teen birth rate. Figure 3 also reveals that the 15 to 17 year-old teen birth rate for the United States is higher than the overall teen birth rate for all other OECD countries except the United Kingdom.

In previous *Report Cards*, the league table format has helped to direct attention to obvious factors that might help to explain the rank order. But the league table of teenage births is more opaque, and if the title were not supplied it might prove difficult to guess. What criterion would place Korea, Japan, Switzerland and the Netherlands in the top four places? On what scale would the United Kingdom stand at more than four times the level of Italy and three times the level of France? Or Greece and Norway find themselves on a par? Or the United States be seen to occupy a level double that of most other industrialized nations?

This *Report Card* will, as usual, seek to identify some of the forces that help to determine these rankings. But teenage birth rates are the result of a complex interplay of forces, and there is no one equation that can adequately explain or predict their outcome. The attempt to analyse the teen birth league table therefore represents a challenge. But it also offers a route into the heart of the issue.

Why the fuss?

For most of history, teenage pregnancy has not been seen as a problem at all but as something normal and desirable. Today, parents, politicians and physicians warn against it, and the governments of most of the 28 countries featured in the league table are trying to reduce it (Figure 4).

The reason for this change is that teenage parenthood has come to be regarded as a significant disadvantage in a world which

The nations of the OECD

The *Innocenti Report Cards* investigate child well-being in rich nations. The series draws data from the 30 members of the Organisation for Economic Co-operation and Development (OECD), the group of countries that produce two-thirds of the world's goods and services.

The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, the Republic of Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom of Great Britain and Northern Ireland, and the United States of America.

Two member countries, Mexico and Turkey, are absent from the analysis of teenage births rates which is presented in this *Report Card*. They have been excluded because they do not share the low overall fertility rates that are common to the OECD membership.
(See sources on page 27.)

increasingly demands an extended education, and in which delayed childbearing, smaller families, two-income households, and careers for women are increasingly becoming the norm.

Figure 5, specially commissioned for this *Report Card* from the University of Essex, UK, shows for the first time the strength of this association between teenage parenthood and subsequent disadvantage across a wide range of industrialized nations. Drawing on data from the European Community Household Panel, the study compares the lives of women who gave birth as teenagers with the lives of those who gave birth in their twenties. And the results reveal a striking pattern. When measured against five different indicators of disadvantage – including poverty, unemployment, and educational underachievement – those who gave birth as teenagers are seen to be markedly worse off in 12 of the 13 EU countries for which data are available (Austria being the notable exception). A teenage mother in Germany, for example, is seen to be more than twice as likely to have left school early and more than twice as likely to be living in poverty. On average across the 13 countries, those who became mothers while still teenagers are seen to be twice as likely to be living in poverty.

Looked at in more detail, the study also shows significant variation *between* countries in the likelihood of disadvantage being associated with teenage pregnancy (Figure 6). In Austria the likelihood of living in poverty in later life (poorest 20 per cent by income) is not strongly associated with giving birth as a teenager. But in Belgium, France, Germany and the United Kingdom a teenage mother is seen to be twice as likely to be living in poverty. And in the Netherlands and Denmark the probability is trebled.

Furthermore, the widely differing levels of teen births in different nations, the varying rates of progress in reducing them, and international disparities in the relationship between teen fertility and overall fertility (Box 3), also suggest that this is a problem that some countries have brought under control and others have not.

Having come to be seen as a policy-susceptible problem, teenage births have become the subject of intense scrutiny in the developed countries: academics from the United States travel to find out why teenage birth rates in the European Union are only a quarter of those seen in America,[1] and task forces from the United Kingdom visit the Netherlands to find out why Dutch teenagers are five times less likely to give birth than teenagers in the UK. Further afield, countries as diverse as Mexico, Russia, Vietnam and Zambia are showing interest in the 'Nordic approach'[2] that has reduced teen births to very low levels across much of northern Europe.

A conflict of premise

In short, teenage births are now seen as a matter of public and political concern, demanding government action in those societies where teenage birth rates remain high.

But neither the problem nor its solution is as straightforward as it might appear.

For example, the association between teenage births and later-life problems may have been exaggerated and is increasingly being challenged. Many teenage mothers have grown up with some degree of poverty or disadvantage and have little in the way of educational qualifications or career prospects – factors that are likely to have negative effects on their future lives whether or not they wait until they are in their twenties before having children. Becoming pregnant while still a teenager may make these problems worse (to an extent that is still undetermined), but not becoming pregnant will not make them go away.

Nor, to the extent that teenage pregnancy *per se* is a problem, are the potential solutions any less controversial. Cultural, historical, and political differences mean that even strategies that have been shown

Figure 2 Number of teenage births and percentage of teenage mothers

	Number of births to women aged below 20 (1998)	Estimated percentage of 20 year-olds who had a child in their teens
AUSTRALIA	**11,849**	**9**
AUSTRIA	**3,275**	**7**
BELGIUM	**2,975**	**4**
CANADA	**19,920**	**10**
CZECH REPUBLIC	**6,035**	**7**
DENMARK	**1,161**	**4**
FINLAND	**1,485**	**4**
FRANCE	**17,985**	**4**
GERMANY	**29,000**	**6**
GREECE	**4,183**	**5**
HUNGARY	**9,175**	**12**
ICELAND	**264**	**9**
IRELAND	**3,138**	**8**
ITALY	**11,153**	**3**
JAPAN	**17,501**	**2**
KOREA	**5,621**	**1**
LUXEMBOURG	**111**	**4**
NETHERLANDS	**2,823**	**3**
NEW ZEALAND	**3,924**	**14**
NORWAY	**1,607**	**5**
POLAND	**30,413**	**9**
PORTUGAL	**7,403**	**9**
SLOVAK REPUBLIC	**6,044**	**12**
SPAIN	**11,264**	**3**
SWEDEN	**1,605**	**3**
SWITZERLAND	**1,092**	**2**
UK	**54,822**	**13**
USA	**494,357**	**22**
TOTAL / AVERAGE	**760,185**	**7**

to work cannot simply be transplanted. The distribution of 'morning after' contraception to sixteen year-olds in schools, for example, has recently been legalized in France but is unlikely to be legitimized in Ireland or Texas. Conversely, capping welfare benefits to unmarried mothers and launching multi-million dollar teenage abstinence campaigns is a strategy that has enjoyed significant popular support and may be yielding some early signs of success in the United States[3] (Box 6), but is unlikely to be adopted enthusiastically in Sweden or Iceland.

To confound the issue further, most such conflicts of policy and strategy have roots in different value systems. If the underlying premise, for example, is the social and utilitarian ideal of reducing teenage births because of the disadvantages they tend to bring in their wake, then the solutions proposed are likely to lean towards earlier and more comprehensive sex education, more liberal abortion laws, and freely available contraception. If, on the other hand, the underlying motive has a strong religious dimension, including perhaps the axioms that sex and childbearing before marriage are wrong and that abortion is unacceptable, then the solutions of choice are more likely to revolve around abstinence campaigns, restrictive abortion laws, reform of benefits systems, and ambiguity at best about sex education and contraception.

Even if fought out with salvoes of statistics and surveys, many of the battles waged around the issue of teenage births are therefore conflicts not of evidence and interpretation but of premise and motivation.

Birth of a problem

It is a truism that social problems can only be understood in context; but the particular difficulty of the teen pregnancy

Figure 3 Birth rates for younger and older teenagers

The table shows the number of births during 1998 per 1,000 women aged 15 to 17 (dark bars) and aged 18 to 19 (pale bars). Countries are ranked by the birth rate for 15 to 17 year-olds. No breakdown of teenage births by age group is available for Korea.

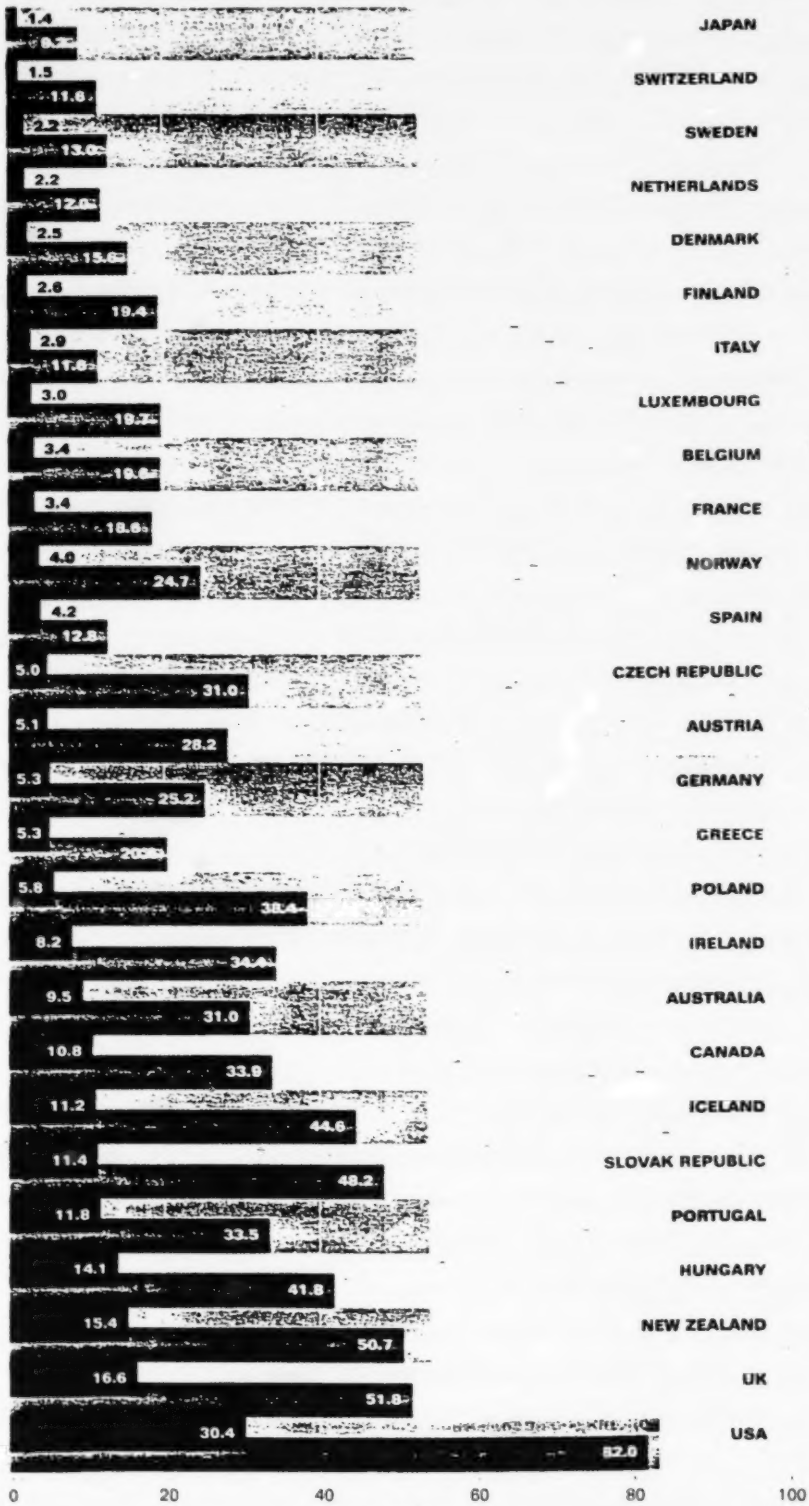

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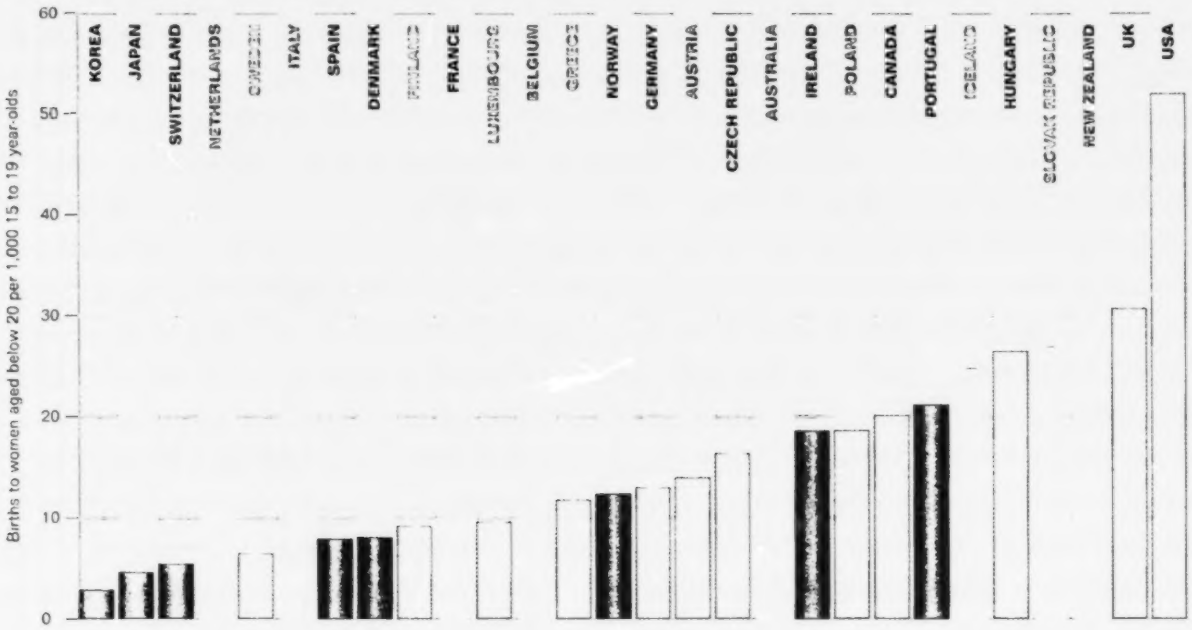
Figure 4 Teenage fertility and family planning policy

The different colours of the bars indicate the government's view on fertility among women aged below 20 in each country (as reported to the UN Population Division): dark bars indicate a 'major concern', pale bars a 'minor concern', and white bars 'not a matter of concern'. Dark type for country name indicates that the government actively intervenes to change fertility among women aged below 20. The table shows the number of births to women aged below 20, expressed per 1,000 women aged 15 to 19 as in Figure 1. (Data for 1998.)



issue is that the context has changed so rapidly and radically that analysis and policy response can easily be outdated. And it is a further source of turbulence and controversy that the world in which many of today's teenagers are growing up is very different from the world which shaped the adolescence of most of today's policy makers.

The forces that have brought about such radical change are well-documented and include the spread of cheap, safe and effective contraception, the liberalization of abortion law, the progress made by women towards educational and career equality, the widespread rejection of traditional sexual codes, and the emergence of a more sexualised society as old taboos have fallen away and sexual imagery and messages have permeated the information environment. Over the same period, powerful economic pressures have favoured two-income households, raised the opportunity costs of having children, placed an increasing premium on education and knowledge, and deepened the relative economic disadvantage of the low-skilled.

The result has been a socio-sexual revolution that has transformed some of the most basic patterns of personal and family life in the industrialized nations:

- *Rising average age at first birth.* As more women enter higher education and establish careers, the average age at first birth has risen to the late twenties (Figure 7). The age at which most women begin childbearing is now approaching 30 in countries such as the Netherlands and Spain.
- *Falling overall fertility.* Changing preferences, the rise of opportunities for women other than motherhood, and the difficulties of combining careers with parenting, have seen the average number of children per woman fall from 2.5 in 1970 to 1.6 in 1998.[4]
- *Divorcing sex from marriage.* Sex before marriage and the expectation of several sexual partners before beginning a stable relationship has now become the norm in most industrialized countries.
- *Lengthening span of contraception.* Average age at first sex has fallen and average age at first birth has risen, and for many women the gap between the two can be as much as twenty years or more.
- *Rising levels of cohabitation.* In some nations – Denmark, France, Iceland, New Zealand, Norway, and Sweden – 40 per cent or more of births are now to unmarried women (Figure 9). In the United States, the percentage of children born outside marriage has increased more than eight-fold in two generations.[5]

These are some of the more obvious and measurable signs of the socio-sexual transformation that has occurred in the

Figure 5 Later life outcomes and age at first birth

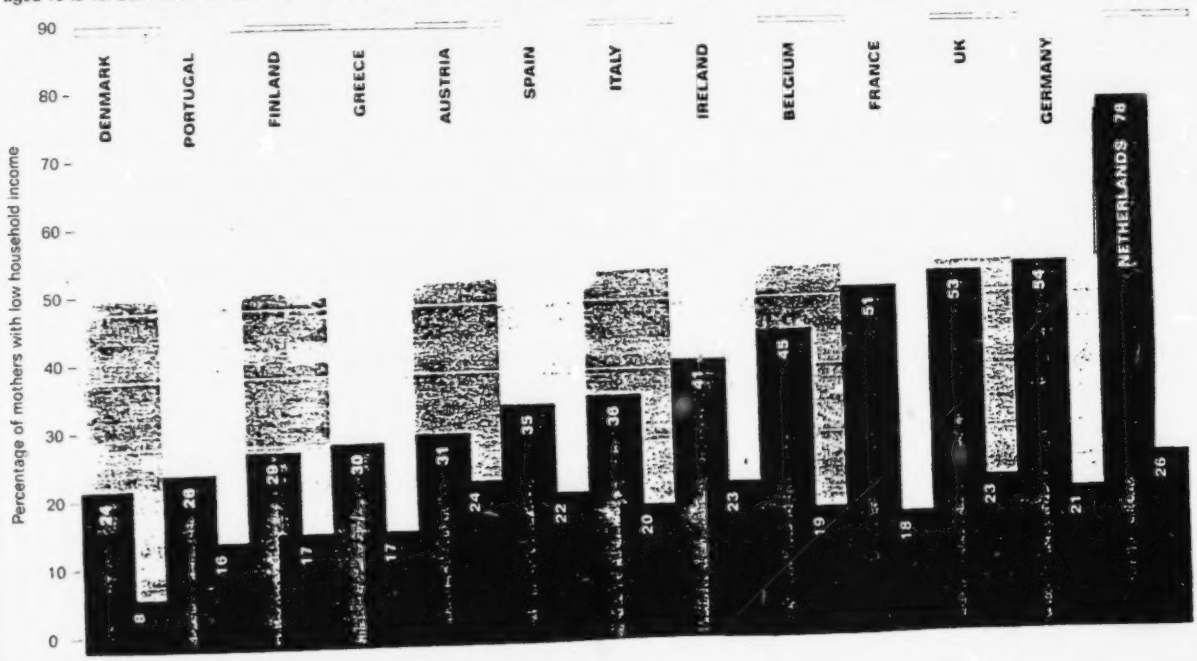
The table shows the percentage of mothers in each of five categories of later life outcomes, by age at birth of first child (e.g. 78 per cent of Dutch women who were teen mothers are in households with income in the lowest 20 per cent, but only 26 per cent of women who had their first child in their 20s are in this income group). On average the women were in their 30s when interviewed – see page 28 for details. The row showing the percentages for ALL COUNTRIES is a weighted average by national population sizes. Countries are ranked in ascending order of teenage birth rate.

Blue shading indicates that differences for individual countries are statistically significant at the 5 per cent level.

	Less than upper secondary education		Not working (inactive or unemployed)		Without partner		Neither woman nor partner working		Household income in lowest 20 per cent	
	15-19	20-29	15-19	20-29	15-19	20-29	15-19	20-29	15-19	20-29
NETHERLANDS	50	22	53	42	13	7	31	7	78	26
ITALY	77	52	64	54	16	3	18	5	36	20
SPAIN	80	59	70	66	20	7	27	12	35	22
DENMARK	65	17	46	25	18	12	22	6	24	8
FINLAND	24	9	42	27	11	5	13	8	29	17
FRANCE	62	24	61	35	16	10	18	6	51	18
BELGIUM	52	22	55	27	24	8	32	7	45	19
GREECE	74	35	61	55	4	6	6	6	30	17
GERMANY	57	24	60	38	18	10	24	5	54	21
AUSTRIA	52	23	30	31	13	12	6	4	31	24
IRELAND	73	37	69	51	42	14	46	14	41	23
PORTUGAL	92	78	37	32	15	7	8	4	26	16
UK	65	37	61	37	39	15	43	14	53	23
ALL COUNTRIES	67	34	59	41	23	19	26	8	45	21
AVERAGE DIFFERENCE	33		18		4		18		24	

Figure 6 Low income and age at first birth

The table shows the percentage of mothers in the poorest 20 per cent, by age of mother at first birth. Pale bars indicate mothers who had their first child aged 15 to 19. Dark bars indicate mothers who had their first child aged 20 to 29. This table graphs the data in the last two columns of Figure 5.



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industrialized world in little more than one generation. And it is this transformation that is the essential context of the teen births issue.

Downward pressures

Almost all of the forces involved have exerted downward pressure on teen birth rates. Increasingly, young people in the industrialized world have both motive and means to delay childbearing. And the results are visible in Figure 8.

Austria, Denmark, France, Germany, Italy, Korea, Sweden and Switzerland have reduced their teenage birth rates by three-quarters or more in the last 30 years. The Czech Republic, Belgium, Finland, Greece, Iceland, the Netherlands and Norway have achieved a reduction of two thirds or more. And as Figure 8 also reveals, the nations of the OECD have been moving at very different speeds. Italy and Portugal, for example, had very similar teen birth rates in 1970 (27.4 and 29.4 respectively) but have very different rates today (6.6 and 21.2). Similarly Norway and the United Kingdom began the period with comparable rates, but over the last three decades Norway has seen teen births fall by 72 per cent – almost double the 38 per cent drop seen in the United Kingdom.

But to some extent Figure 8 is deceptive. The decline in teen births that it records cannot be read in the same way as declines in, for example, disease rates or poverty levels or road deaths. For the forces that have brought about the fall have also changed the nature of the problem – indeed it might even be said that they have to some extent created the problem.

To put the case at its most extreme, there is all the difference in the world between a teenage girl of thirty or forty years ago who left school at 16, married at 18 with the blessing of family and church, had a wanted baby at 19, and became a mother and housewife with a home, a husband with a job, and a supportive family and society – and a girl of today who becomes pregnant at 17 as the result of a short-term relationship, drops out of school, is evicted from the family home, and attempts to bring up a child alone and on welfare, in poverty and poor housing, unsupported by partner or family or community in the demanding business of bringing up a child.

Clearly, not all teenage births in the industrialized world of the 1960s or 1970s matched the first of these descriptions, any more than all teenage births today match the second. But the two pictures serve to illustrate two very different realities which Figure 8 presents as one – two different points on a road along which most industrialized nations are travelling at different rates. Even today, there are teenage births in every nation that correspond more closely to the former description. And the proportion of such births will differ from

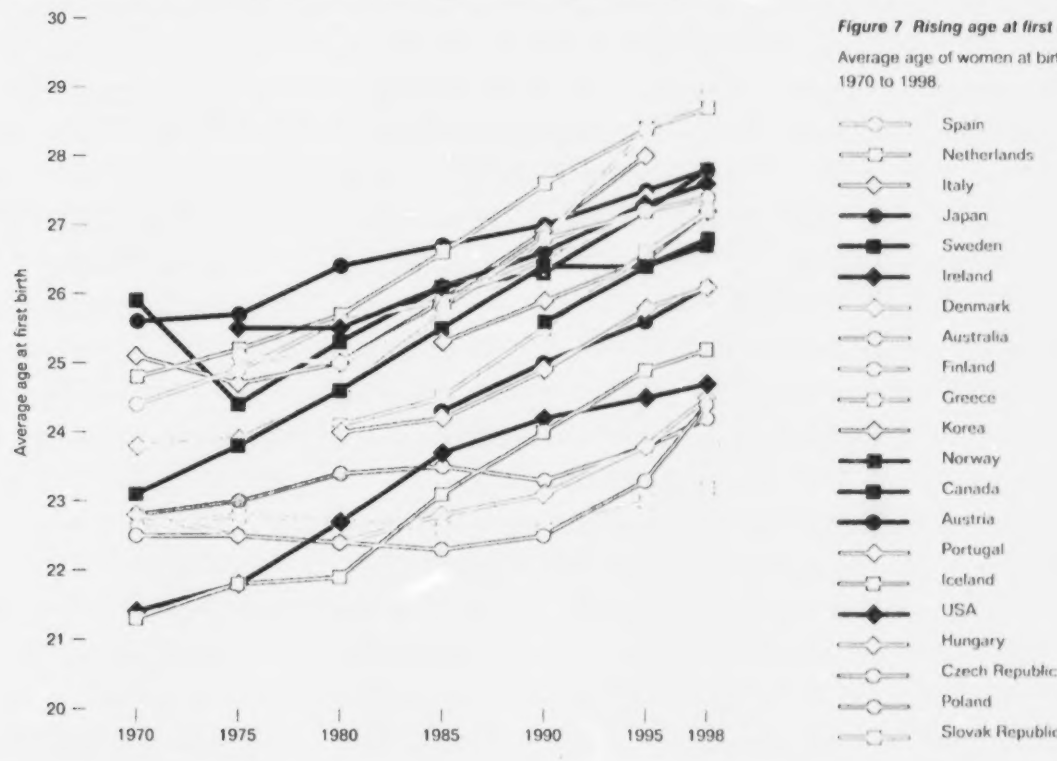

Figure 7 Rising age at first birth

Average age of women at birth of first child, 1970 to 1998.

country to country. It is unlikely, for example, that low teenage birth rates in northern Europe reflect the same balance of forces as low rates in southern Europe.

Figure 8 must therefore be interpreted with caution, and with one eye on the degree to which the level of teenage births in any given country may reflect more traditional values. And although no one indicator can reveal the strength of those traditional values in a given country, Figure 9 may offer a hint by showing the percentage of births occurring within marriage in 27 OECD nations. It suggests, for example, that a significant proportion of teenage births in Greece and Japan may be of the more traditional kind – as 80 per cent or more of teenage births in those two countries are to teenagers who are married. But it is also worth noting that more than 50 per cent of teenage births are to married teenagers in Italy, Luxembourg, Poland, the Slovak Republic and Switzerland.

The comparison between teenage birth rates today and teenage birth rates of 30 years ago must therefore take into account that the nature of what is being compared has changed. As a phenomenon, teenage birth has declined: it is as a *problem* that it is perceived to have grown.

The sexualised society

It has been argued that the overall effect of the socio-sexual transformation of recent times has been to bring strong downward pressure to bear on teenage birth rates. But not all of the forces involved have been pulling in the same downward direction.

In particular the weakening of traditional attitudes has combined with commercial pressures to create more sexualised societies in which old taboos serve mainly to add to the allure of the formerly forbidden. Increasingly, sexual

Figure 8 Teenage birth rates now and 30 years ago

The pale bars show the number of births to women aged below 20 per 1,000 women aged 15 to 19 in 1970 (the basis for the ranking). The dark bars show the rates in 1998 (as in Figure 1)

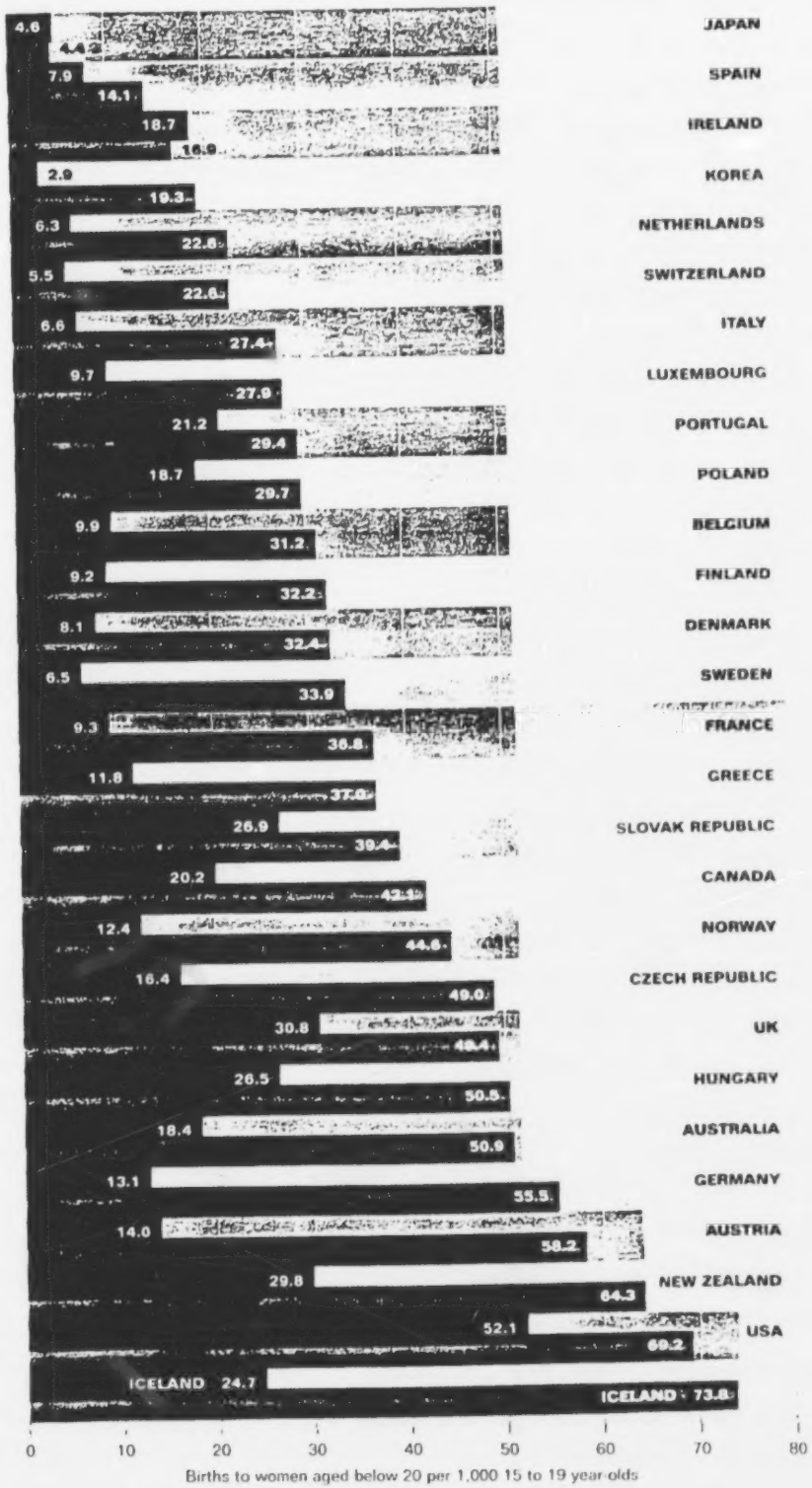

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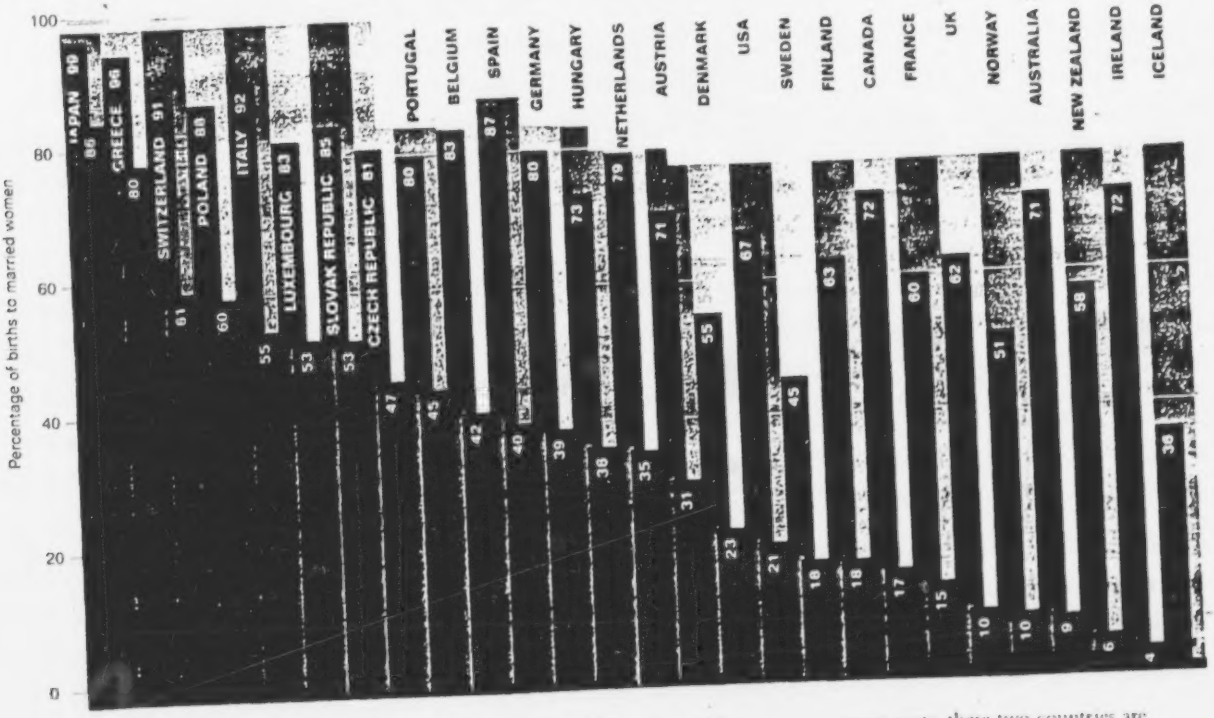
Figure 9 Births to married women

The dark bars show the percentage of children born to women aged below 20 whose mothers were married at the time of birth. The pale bars show the percentage of children born to women of all ages whose mothers were married at the time of birth. (Data are for 1998.)



imagery and content are permeating the information and entertainment environments within which today's teenagers develop awareness, experiment with identity, and live out their aspirations towards adulthood.

Unsurprisingly in such a context, sexual activity among teenagers has increased (perhaps aided by a fall in the average age of puberty as a result of better health and nutrition[6]). In the United States, for example, the percentage of all adolescents who have sex by the age of 18 has doubled since the 1950s.[7] Today, 85 per cent of American males and 77 per cent of American females have had sex by the age of 19.[8]

But it is among younger teenagers that the kaleidoscope has been most vigorously shaken. According to some sources, for example, seven per cent of American children now have sex even before they have become teenagers. Among 15 year-old American girls, a quarter have already had full sexual intercourse; and by age 17 the proportion is close to 50 per cent.[9]

Available figures for the United Kingdom tell broadly the same story. Forty years ago the average age at first sex was 20 for males and 21 for females; today it is 17 for both sexes.[10] Among under sixteens, the proportion who report having had sex has doubled in a generation to 30 per cent for males and 20 per cent for females (1991). More recent statistics suggest that the number of girls having under-age sex (below 16) has doubled in the last 10 years, and that almost 40 per cent of 15 year-old girls have had full sexual intercourse.[11]

Although the United States and the United Kingdom furnish the best documented examples of this trend, perhaps because it is here that the problem of teenage pregnancy is at its most acute, these two countries are clearly not alone. Similar patterns prevail in Australia where even in 1992 more than 10 per cent of 12 to 14 year-old boys were reporting that they had had sex, rising to over 25 per cent for 15 year-olds and to 50 per cent for 17 year-olds.[12] In Iceland, the average age at first sex is now 15.4 years for both girls and boys.[13] In Finland, figures for 1991 show that 13 per cent of 14 year-olds and 29 per cent of 15 year-olds are sexually experienced, and that half have had sex before the age of 18.[14]

In sum, the average age at first sex has fallen sharply in some parts of the industrialized world; and in 10 of the 12 OECD nations for which data are available more than two-thirds of young people have sexual intercourse while still in their teens (Figure 10). In Denmark, Finland, Germany, Iceland, Norway, the United Kingdom and the United States, the proportion is over 80 per cent.[15]

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Motive and means

Such a change, all other things being equal, could obviously have been expected to produce significant increases in teenage birth rates. The fact that it has not done so is testimony to the combined power of the already mentioned forces that have provided both motive and means to delay childbearing.

'Motive and means' are therefore key factors in the teenage birth equation. And they direct attention to whether and to what extent societies have responded to the socio-sexual transformation by changing the ways in which young people are prepared for the beginning of their sexual lives. One of the keys to interpreting the league table of teenage birth rates therefore seems to be that countries with low teenage birth rates tend to be *either* countries that have travelled less far from traditional values *or* countries which have embraced the socio-sexual transformation *but have also taken steps to equip their young people to cope with it*. By the same reasoning, those countries with the highest teenage birth rates tend to be those that have matched far along the road from traditional values whilst doing little to prepare their young people for the new and different world in which they find themselves.

This commentary will return to the issue of young people's abilities to manage the new pressures. But analysing the league table of teenage birth rates exclusively in terms of the balance between traditional and modern forces, and the ability of today's teenagers to cope, ignores a major dimension of the problem to which we must now turn.

The unequal impact

If teenage birth rates cannot be understood outside the context of the socio-sexual transformation, neither can they be understood outside the context of economic and social inequality. For the forces of change have not treated all young people equally. Indeed even the attempt to prepare young people for life in a more sexualised society – for example by better sex education – can become a sphere in which relative disadvantage operates. But it is in the arena of motive, more even than of means, that the unequal impact of these forces manifests itself most starkly.

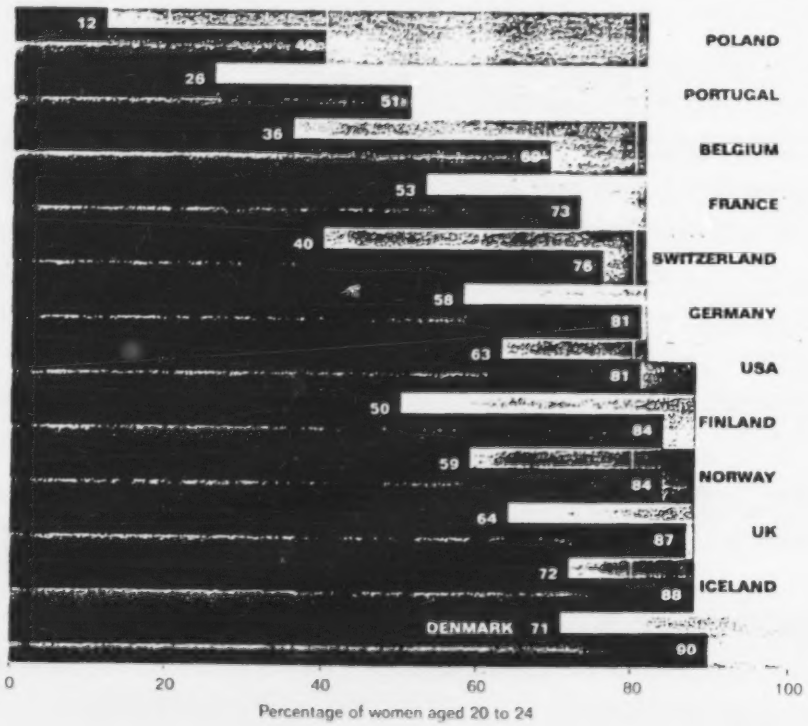
The different ways in which the forces of the socio-sexual transformation affect the lives of young people are largely self-evident but may again be caricatured in a tale of two teenagers.

Teenager one is growing up in relative affluence. She is likely to be doing well at school, has reasonable expectations of higher education and a rewarding career, and is likely to be surrounded by friends and family who have similarly high expectations. If she decides to have sex she is likely to know about the risks and to have the kind of relationship that allows her to discuss contraception with her partner. If despite all she finds herself pregnant, then she is likely to feel that having a baby would change her life significantly and for the worse. More often than not she will choose to have an abortion. For all of these reasons, embracing both motive and means, teenager one is unlikely to become a teenage mother.

Teenager two has grown up in relative poverty. She is more likely to see herself as a failure at school and probably has little hope of further education or anything other than an unskilled and low-paid job. If she has sex, it may well be opportunistic, unprotected, and possibly unwanted. She probably knows little about contraception, and may not feel able to discuss it with her partner or

Figure 10 Age at first sex

The pale bars show the percentage of women who report having had sex before age 20. The dark bars show the percentage of women who report having had sex before age 18. All women surveyed were age 20 to 24 (data for different years in the early 1990s).



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Race and place

Is a nation's standing in the teen births league table affected by the teen birth rates of its ethnic minority groups?

Teenage births among immigrant or ethnic minorities are often, though not always, higher than the average for their nation as a whole. Usually, the difference reflects traditional values favouring early marriage and childbearing, plus the social and economic disadvantage commonly experienced by such communities.

In the UK, for example, the birth rate per 1,000 teenagers in the 1980s was 75 for the Bangladeshi and 44 for the Caribbean communities, as opposed to 29 for whites and only 17 for the Indian community. Similarly in the United States, the teenage birth rate is approximately twice as high for black teenagers as for white (85 as opposed to 45) and higher still (94) for the Hispanic community.

At the top end of the league table, a significant percentage of teenage mothers in the Netherlands are from ethnic minority groups such as the Turkish, Netherlands Antilles, and Surinamese communities (where the teen birth rates are 31, 40, and 17 respectively, as opposed to 6 for the Netherlands as a whole).

But this ethnic factor has no significant effect on national standings in the teen births league table (Figure 1). Even if we use only the birth rate among white teenagers, for example, the United States and the United Kingdom remain firmly at the bottom of the league.

The exception to this is New Zealand, where the teenage birth rate of 30 per 1,000 is significantly increased by the much higher rate (74 per 1,000) among the Maori community. As Maori constitute more than 20 per cent of the total teenage population, the teenage birth rate for the non-Maori community falls to approximately 18 – which if applied nationally would lift New Zealand from twenty-sixth to eighteenth in the league table of teen births.

Geographic difference

Disaggregating national data is almost always useful for the purpose of more closely informing analysis and policy. But too often ethnic differences are used to draw the wrong conclusions while other equally important ways of breaking down the statistics are ignored.

In Italy, for example, the teenage birth rate in the central region of the country is only 3.3 per 1,000 – lower than any OECD country except Korea; in the South, by contrast, the rate is 10.0 which if applied nationally would drop Italy from sixth to twelfth place in the league table.

Similarly in Canada, the teenage birth rates for Quebec, Ontario and British Colombia are in the range of 16 to 18 whereas in Saskatchewan and Manitoba the range is 37 to 38 (higher than in any other OECD country except the United States).

Most such methods of breaking down national data also capture, to some degree, the element of socio-economic disadvantage which so powerfully affects teenage birth rates.

Source: see page 30

insist on his using a condom. If she subsequently becomes pregnant she is less likely to seek or to receive help, and less likely to have an abortion. Teenager two may also be unhappy at home, and perhaps desperate to find a way of getting out and starting life on her own or with her partner (though the chances are that her partner will no longer be around[16]). She is probably also vaguely aware that if she has the baby she will receive some kind of financial help, including perhaps housing and welfare benefits. Almost certainly, she will have little idea of how demanding and difficult bringing up a child in such circumstances will be. But she may decide that having a baby is the least unattractive alternative open to her (and she may be right). Teenager two is therefore more likely to enter the statistics of teenage motherhood.

As in the earlier example, it would be untrue and unfair to suggest that all teenage girls from poor backgrounds fall into the category of teenager two, or that all girls from better-off homes conform to the stereotype of teenager one. An economically poor background does not preclude either success at school or a happy and supportive home; and an affluent background is no guarantee of either – or of the ability to cope with sex and relationships (teenagers in the most affluent areas of the United Kingdom have a significantly higher birth rate than the average rate for the Netherlands or France[17]).

But our two stereotype teenagers nonetheless serve to show some of the ways in which the strong association between teenage pregnancy and disadvantage might operate.

The consistency of that association is borne out by evidence from many developed nations, though again it is the 'problem countries' that tend to be best

documented. In the United States, for example, teenagers living in low income families constitute less than 40 per cent of the teenage population but account for over 80 per cent of teenage births and 60 per cent of teenage abortions.[18] *"The likelihood that teenagers engage in unprotected sex, become pregnant, and give birth,"* concludes one US study, *"is highly correlated with multiple risk factors. These factors include growing up in a single parent family, living in poverty and/or a high-poverty neighborhood, having low attachment to performance at school, and having parents with low educational achievement."*[19]

Figure 11 Teenage births, income inequality, and youth out of school

The table shows: teenage birth rates (as in Figure 1); an index of income inequality where higher values indicate greater inequality (the Gini coefficient based on per capita household income); and the percentage of 15 to 19 year-olds not enrolled in education in 1998. Dark blue denotes the worst performing countries, medium blue the average performers, and light blue the best. Where no number is given, the grouping has been estimated.

	Teenage birth rate	Income inequality index	Percentage of 15 to 19 year-olds not in education
KOREA	2.9		21.4
JAPAN	4.6		
SWITZERLAND	5.5	35.5	15.9
NETHERLANDS	6.2	30.2	14.0
SWEDEN	6.5	25.3	13.9
ITALY	6.8	35.9	30.2
SPAIN	7.8	32.4	23.5
DENMARK	8.1	24.6	19.9
FINLAND	9.2	24.6	17.9
FRANCE	9.3	32.4	12.2
LUXEMBOURG	9.7	26.9	
BELGIUM	9.9	27.7	13.9
GREECE	11.8	35.6	22.4
NORWAY	12.4	25.7	13.6
GERMANY	13.1	30.0	11.7
AUSTRIA	14.0	30.4	23.8
CZECH REPUBLIC	16.4	25.8	25.1
AUSTRALIA	18.4	33.7	18.4
IRELAND	18.7	34.6	19.3
POLAND	18.7	35.8	18.6
CANADA	20.2	31.7	22.0
PORTUGAL	21.2	38.2	23.8
ICELAND	24.7		20.3
HUNGARY	26.5	25.0	24.6
SLOVAK REPUBLIC	26.9	26.2	
NEW ZEALAND	29.8	37.0	28.3
UK	30.8	36.6	30.5
USA	52.1	40.6	25.8

Similarly in the United Kingdom, the likelihood of teenage pregnancy has been shown to be ten times higher for girls whose parents are unskilled manual workers than for girls whose parents are middle class professionals.[20] And according to a 1995 study, the chances of a girl giving birth while still a teenager are significantly increased by a range of background factors including financial adversity, emotional difficulties during childhood and adolescence, low educational attainment, and having a mother who was herself a teenage parent. Strikingly, the same study concluded that the probability of a young woman with all of these problems becoming a teenage mother is more than 40 per cent, while for a young woman with none of these problems the probability is less than 4 per cent.[21]

Index of hope

To this extent, therefore, the league table of teenage pregnancy reflects motivation as well as means; it is an index not just of success in equipping teenagers to prevent births but of success in building a more inclusive society; it is, in one dimension, an index of hope, of teenagers' own sense of current well-being and future prospects.

Pursuing this theme, Figure 11 shows the teenage birth rate of 28 OECD nations alongside two common indicators of 'inclusiveness'. For each country, it tabulates the teenage birth rate, the degree of income inequality, and the percentage of 15 to 19 year-olds not enrolled in education (using light blue, medium blue and dark blue to indicate whether a country is in the top third, middle third or bottom third under each

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indicator). And although Figure 11 demonstrates association rather than cause, it nonetheless reveals a clear tendency for less inclusive societies to have higher teenage birth rates.

In sum, adding this dimension of disadvantage to our view of the teenage birth league table means that a country's standing in that table may in some degree be explained by:

a) A combination of how far a particular country has travelled down the road from traditional values *and* to what extent that society has prepared young people for this new world (of which the key practical test is the effective use of contraception), and

b) What proportion of teenagers are strongly motivated to avoid early parenthood because they feel that they have an expectation of reasonable education and employment, and of being included in the opportunities and advantages of living in an economically advanced society.

Cause or correlation?

If these are some of the factors that help to explain different levels of teenage births in developed nations, what do they have to say about current attempts to reduce those rates?

First, the fact that disadvantage and disaffection seem to be major factors represents a fundamental challenge to all such attempts. And it forces a return to the question touched on at the beginning of this report. Are teenage births a cause of the disadvantages in later life that are summarized in Figure 5? Or do they merely stand proxy for a complex of pre-existing disadvantages that are the real reason behind later-life problems and that would be largely unaffected by delaying childbearing by a few years? In other words, would even a successful national programme to reduce teenage births really make much difference if all it achieved was a delay in beginning childbearing while leaving untouched the underlying disadvantages which predispose young people towards teenage births?

Clearly, the answer depends on whether the negative outcomes associated with teenage births reflect causality or merely correlation.

In an attempt to answer this question, research has for the most part concentrated on statistical methods of controlling for pre-existing factors in order to remove them from the equation.

Figure 12, for example, summarizes the results of one such attempt in the United Kingdom. And it concludes that, even if the effects of economic disadvantage are cancelled out by looking only at those who grew up in poverty during the 1960s and 1970s, the chances of those women still living in poverty today are almost doubled by having had a baby while still a teenager. Reviewing such evidence, a report by an expert working group in the United Kingdom concludes: "*Whatever the extent to which teenage birth results from hardship and deprivation, it also contributes to such outcomes. After taking into account the effects of education and social class, women who give birth in their teens are more likely to live in a poor area of the country, are less likely to own their own home, and are less likely to be in paid work, than those who did not. An interpretation of these findings that has logical appeal takes account of the fact that if young women and their partners defer parenthood, they will have greater opportunities for training, jobs, and financial betterment.*"[22]

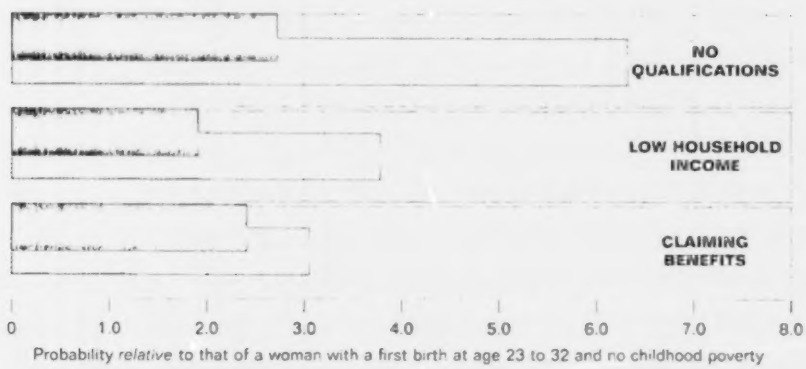
Overall, the results of most such studies have tended to agree that although many of the problems experienced by teenage mothers are indeed the result of pre-existing social and economic factors, there is still a substantial degree of disadvantage that can be directly attributed to the fact of having given birth while still a teenager.

But the extensive use of statistical controls, which cannot entirely take into account subtler and less measurable

Figure 12 Later life outcomes and age at first birth in the UK

This table shows the effects in the UK of teenage birth and childhood poverty (net of other childhood factors) on the odds of having no qualifications, low household income (bottom 25 per cent of distribution), and claiming benefits at age 33.

Always relative to the probability for a woman who had her first child aged 23 to 32 and who did not experience childhood poverty, the figure shows the probabilities of experiencing each later life outcome: dark bars for a woman who had a child as a teenager and who did not experience childhood poverty, pale bars for a woman who had a child as a teenager and who experienced clear childhood poverty, and white bars for a woman who had her first child aged 23 to 32 and who experienced clear childhood poverty.



factors such as parental attitudes, means that these results have not necessarily been accepted as conclusive.

More recent research has attempted to attack the problem by exploiting 'natural experiments'. One pioneering study, for example, compared the later-life outcomes of sisters in cases where one sister had given birth as a teenager and the other not. Other studies have attempted to compare the subsequent fortunes of teenagers who gave birth with those of teenagers who became pregnant but miscarried. In both these cases it may reasonably be assumed that most of the background factors, including unmeasurable influences, were probably similar.[23] Pre-existing circumstances can therefore be largely cancelled out of the equation, enabling researchers to focus on the degree of disadvantage that can be said to be caused by teenage birth.

Unfortunately, such approaches have themselves been subject to methodological or sampling problems (such as the under-reporting of miscarriages or their possible independent effects). Not least, all studies of long-term disadvantage suffer from the obvious and inevitable drawback of being able to draw conclusions only about the past. Looking at the long-term effects of teenage pregnancy on mothers and children requires following the fortunes

Sexual health

The problems associated with the increasing sexual pressures on young people are wider than the risks of pregnancy and the consequences of childbearing.

For many, the pressure to become involved in sexual activity at too early an age brings emotional and psychological anxieties. Others live with the fear or the reality of sexually transmitted infections, including AIDS.

Still others are victims of unwanted sex. A quarter of American teenagers report that their first experience of sex was unwanted, and seven per cent say that it was actually involuntary. In New Zealand a study of women born in 1972 also found that 7 per cent said that first sex was not only unwanted but forced upon them.

Preparing young people to live in an increasingly sexualised society therefore needs to be about more than just contraception – and to be directed equally at both sexes. In the Netherlands, for example, sex education concerns itself with sexually transmitted infections, the balance of gender power, managing relationships, and coping with pressures from partners and peer groups. *"A more open approach to sexual conduct need not be value free,"* says Roger Ingham, Director of the Centre for Sexual Health Research at the UK's Southampton University, *"Sex and relationship education can and must be based on values of respect and mutuality, whether or not these are located within specific religious or cultural frameworks."*

TBRs and STDs

In particular, sex education needs to help young people protect themselves against the dangers of sexually transmitted diseases (STDs). And the kind of sex education which has helped produce some of the world's lowest teenage births has also brought low and declining rates of sexually transmitted infections, including HIV/AIDS.

In Sweden, for example, the number of STDs has fallen by 40 per cent in the early 1990s. In the Netherlands (where the so-called 'double Dutch' method of using both contraceptive pill and condom is widely used) the level of sexually transmitted infections is low and falling.

In the two countries with the highest teenage birth rates in the OECD, by contrast, STDs are a matter of increasing concern.

Among teenagers in the United Kingdom, half of under 16s and a third of 16 to 19 year-olds use no contraception at first sex, and a quarter of all teenagers believe that the pill protects against STDs. Partly as a result, the incidence of gonorrhoea among British teenagers rose by 45 per cent between 1995 and 1997.

In the United States, where a similar proportion (over 40 per cent) of sexually experienced teenagers say that they do not use contraception every time they have sex, the picture is also worrying. Every year some 3 million American teenagers contract a sexually transmitted infection (about 1 in every 4 sexually experienced teenagers). Approximately a quarter of all new cases of HIV/AIDS are diagnosed in young people under the age of 22.

Much of this burden of disease arises from ignorance of the risks. In one act of unprotected sex with an infected partner, a teenage woman has a 1 in 100 chance of contracting HIV, a 1 in 3 chance of contracting genital herpes, and a 1 in 2 chance of contracting gonorrhoea.

Source: see page 30

of those who became pregnant 20 or 30 years ago. But the world has moved on since the 1970s and 1980s. Recent decades, for example, have seen a sharp increase in the job market's demands for skills and qualifications; and in the case of the United States a spate of welfare reforms that have severely limited the benefits available to unmarried mothers.[24] In such a dynamic environment there is an obvious danger in applying lessons from the past to the present or the future.

As for the impact on the *children* of teenage mothers, the balance of evidence points to similar conclusions. A major US study titled *'Kids Having Kids'* reports that, *"Even given the differences in the mother's characteristics and the policy environment in which the children were raised, delaying childbearing from ages 16 to 17 until ages 20 to 21 would increase the probability that the children would graduate from high school by about 9 per cent. The probability of the daughters giving birth as a teen would fall by about 22 per cent. The probability that the daughters would give birth out of wedlock as a teen would fall by about 10 per cent. And the probability of being economically inactive as young adults would decrease by about 19 per cent."*[25]

The current consensus therefore seems to be that the importance of teenage births as a *cause* of subsequent problems has tended to be exaggerated, but that it still represents a significant problem. *"It is much too early to conclude that policy efforts to reduce teenage pregnancy and childbearing are misguided,"* concludes an overview of research into this question by Saul Hoffman of the University of Delaware, US. *"Reduction of early parenthood,"* he argues, *"will not eliminate the powerful effects of growing up in poverty and disadvantage. But it represents a potentially productive strategy for widening the pathways out of poverty or, at the very least, not compounding the handicaps imposed by social disadvantage."*[26]

Meanwhile, the less elusive implications of high teenage birth rates should not be overlooked. Even where the incentive to avoid pregnancy may not be particularly strong, it is known that most teenage mothers in the two countries with the highest teenage birth rates – the United States and the United Kingdom – neither wished nor intended to become pregnant. Most of those teenagers say that they did not know enough about either contraception or the demands and difficulties of childcare, and that they wish that they had waited before starting a family. Enabling young women to exercise such choices, thereby giving them more control over their own lives, is in itself a powerful justification for the attempt to lower teenage birth rates.

Top and bottom

Given such arguments, what does international comparison have to say about the approaches that are most likely to be effective? And what, if anything, can be learnt from those countries that have already achieved low levels of teenage pregnancy?

Of the top ten countries in the league table, all except Italy and Switzerland could be described as 'inclusive societies' as judged by the degree of income equality (Figure 11). In addition, Korea, Japan, Italy, and Spain would appear to enjoy a top ten position not because of changes in the sexual education of young people but more probably because traditional values remain a significant influence. In Korea particularly, the extremely low teenage birth rate is likely to be, at least in part, a reflection of the fact that pre-marital sex and pregnancy tend to incur strong social disapproval, that contraceptive advice is intended for married couples, and that teenage girls who find themselves pregnant face considerable social and financial difficulties.[27] Even in the case of Italy, where widespread poverty in the south undermines the idea of an inclusive society, it may be that the continuing hold of more traditional values in the south helps to keep teenage birth rates lower than its poverty rate might lead one to expect.

Other top ten countries, such as the Netherlands, Sweden, Denmark, Finland and France, have travelled far down the road from traditional values but have achieved a rapid fall in teenage birth rates by being fully exposed to the forces that have tended to make early childbearing a disadvantage, by being relatively inclusive societies, and by making conscious and apparently successful efforts to prepare and equip their young people to cope with a more sexualised society.

Still others, like Switzerland (and even perhaps the Netherlands where Calvinist traditions are still powerful in some areas) may have achieved low teenage birth rates by an uneasy combination of both factors. Switzerland, for example, has a long history of school-based sex education[28] but also retains a strong grip on traditional values. As Figure 9 shows, more than 60 per cent of Swiss teenage births are to teenagers who are married, a higher proportion than in most northern European nations.

Looking to the bottom half of the league table, it may be that high teenage birth rates in countries such as the Czech Republic, Hungary, Poland, Portugal, and the Slovak Republic include a significant proportion of more traditional teenage births (as suggested by Figure 9 showing that a relatively high proportion of teenage births in such countries are to married teenagers).

At the bottom of the table are countries such as New Zealand, the United

Teen births versus overall fertility

When judged against levels in much of the rest of the world, fertility among all women of childbearing age is very low in each of the 28 OECD countries considered in this *Report Card*. In every case it is below the 'replacement level' required to keep a country's total population constant. Nevertheless, these overall fertility rates do vary substantially across the 28 countries – by a factor of nearly two to one. Are countries with high teen births those where women of all ages have greater numbers of children?

On the one hand the level of teenage births in a country may reflect many of the influences on fertility among women of all ages – the opportunities for women to work and the general availability of contraception and abortion. If so, teenage fertility and overall fertility would be strongly related and there would be nothing particularly special to any country about the factors affecting births among its teenagers.

On the other hand a country's teenage birth rate may be only weakly related to overall fertility. The 'motives and means' for teenagers to delay childbearing may vary markedly across the industrialized nations in ways that are not strongly connected to the factors that affect fertility among all women.

The graph compares the *actual* teen birth rates in the OECD countries (the bars) with the rates that would be *expected* on the basis of each country's overall fertility rate (the diamonds). The 'expected' rates are not to be seen as the levels that the OECD countries 'should' have. For example, the fact that Iceland has an expected rate equal to its actual rate does not mean that Icelanders should be content with their record on teenage births: twenty-third place in the teenage birth league (see Figure 1).

The US, the UK, Hungary and the Slovak Republic stand out as having teen birth rates that are much higher than would be expected on the basis of their levels of overall fertility. New Zealand, Portugal, Poland and the Czech Republic are also countries where the actual rate is significantly higher than the predicted one.

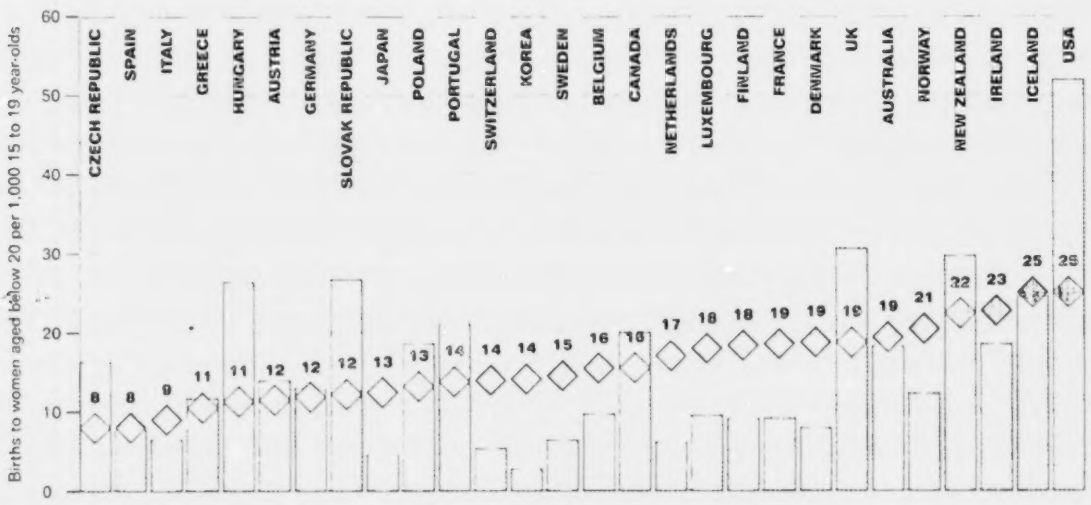
Denmark, the Netherlands and Korea are the opposite. These are countries that manage to keep their teenage birth rates much lower than would be expected from fertility levels among all women. Despite having overall fertility that is quite high by OECD standards, Denmark succeeds in coming eighth in the teenage birth league. The Netherlands is in fourth place, two places above Italy, despite a substantially higher level of overall fertility.

Portugal and Switzerland have the same fertility rate and hence the same 'expected' teen birth rate, 14 per 1000. But their actual rates differ sharply – 18 countries come between them in the teenage birth league. There must be factors that push teenage births up in Portugal and down in Switzerland which have little to do with the factors influencing the overall level of fertility in the two countries. The UK and France or Canada and Belgium provide similar contrasts.

Source: see page 31

Teenage birth rates and overall fertility

The bars show actual teenage birth rates (as in Figure 1), while the diamonds show the teenage birth rates expected on the basis of each country's total fertility (the basis for the ranking).



Kingdom, and the United States – all less inclusive societies as measured by high levels of income inequality and the proportion of older teenagers not in education (Figure 11). It appears likely, therefore, that a larger proportion of young people in these countries may be less than strongly motivated to delay childbearing. At the same time, the United Kingdom and the United States are also societies that have experienced the socio-sexual transformation, including the sexualisation of the information environment, but without making commensurate changes to prepare young people to cope with the new pressures. Contraceptive advice and services may be formally available, but in a 'closed' atmosphere of embarrassment and secrecy. Or as one British teenager puts it, *"it sometimes seems as if sex is compulsory but contraception is illegal."*[29]

Summing up many such interviews with young people, the UK government's Social Exclusion Unit concludes, *"The universal message received from young people is that the sex and relationships education they receive falls far short of what they would like to equip them for managing relations as they grow into adulthood."*[30]

These factors may go a long way towards explaining the lowly position of the United Kingdom and the United States in the league table of teenage births.

Figure 13 Birth and abortion rates

The table shows the number of births (dark half of bar) and of abortions (pale half of bar) to women aged below 20, expressed per 1,000 women aged 15 to 19. (Data are for 1996.)

Combined number of births and abortions to women aged below 20 per 1,000 15 to 19 year-olds.

Dutch lessons

As far as policy issues are concerned, it therefore appears to be the northern European countries that hold the key to lowering teenage birth rates in modernized societies. (Unless one argues that a large-scale return to traditional sexual values is desirable and realistic, although this would presumably have to include a return to the very different economic and media environments which sustained such values.)

Figure 13, however, shows the danger of treating the northern European countries as a homogeneous group.

By adding the teenage abortion rate to the teenage birth rate, Figure 13 serves as an approximate teenage conception rate (with no allowance made for the small number of miscarriages or for the fact that abortion may be under-reported in some countries). And it shows that several northern European nations have achieved low teenage birth rates partly by relying on relatively high levels of abortion. In Denmark, two thirds of teenage pregnancies are terminated. In France and Norway the termination rate is about 60 per cent; in Sweden 70 per cent. The 'Nordic model' is therefore, at its present stage, far from being an ideal. To some extent the level of abortion may reflect the acceptability of terminating

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pregnancies in a given society; but abortion is no one's first choice, and therefore must also be seen as a measure of failure to educate and equip young people to use contraception effectively.

The Netherlands, on the other hand, not only has one of the lowest teenage birth rates in Europe but also one of the lowest teenage abortion rates in the developed world.

This is a remarkable achievement, summed up by the position of the Netherlands in Figures 8 and 13. Whilst experiencing the same socio-sexual transformation as other advanced Western economies, the Dutch have managed to reduce teenage births by 72 per cent in 30 years (Sweden and Denmark have achieved very similar reductions but have teenage abortion rates that are approximately four times higher). And as it is clear that this is an achievement that springs not only from the particularities of culture or history but from conscious policy, it is to the Netherlands that most attention has been directed in the search for 'what works'.

In general, studies of the Dutch experience have concluded that the underlying reason for success has been the combination of a relatively inclusive society with more open attitudes towards sex and sex education, including contraception. This has paved the way for sexual relationships to be discussed at an early age – before barriers of embarrassment can be raised and before sex education can be interpreted as sending a signal that the time has come to start having sex. According to the conclusions of a 1994 international conference under the title of 'Can we learn from the Dutch?', for example, young people in the Netherlands *"feel comfortable discussing sexuality in a warm, mutually supporting atmosphere"* in which *"requests for contraceptive services are not associated with shame or embarrassment"* and in which *"the media is willing to carry explicit messages designed for young people about contraceptive services"*. The result is that using contraceptives, as one teenage survey respondent put it, *"is as ingrained as not going through a red light."*[31]

'Openness' about sex and contraception, commented on by many observers of the Netherlands, is obviously difficult to capture in statistics (although one study has concluded that teenage boys in the Netherlands are two to three times more likely to discuss contraception with their sexual partners than teenagers in the United Kingdom, and that parents are twice as likely to discuss sex with their children[32]). But it appears to be a significant element in the Dutch achievement. Whereas contraceptives and contraceptive advice appear to be just as freely available in many other OECD countries, the atmosphere surrounding contraception is markedly different in the Netherlands. One Europe-wide study of 'what works', for example, has concluded that *"the spirit in which sex education is offered and delivered appears to be more important than the specific approach adopted."*[33]

Other telling indicators of openness and of teenagers being more in control, particularly when compared with countries where teenage births are much more common, are that young people in the Netherlands have a higher average age at first intercourse, lower levels of subsequent regret, higher levels of contraceptive use and effectiveness, and report more discussion and forward planning between partners.[34]

The Nordic approach

Similar conclusions might also be drawn from Sweden, Norway, Denmark and Finland – all countries which have achieved low levels of teenage births despite being in the vanguard of the socio-sexual revolution. Even using the approximate teenage conception rate (adding together the birth and abortion rates, as in Figure 13), the Nordic countries have achieved significantly lower rates of teenage pregnancy than the countries at the bottom of the league table. The teen conception rate in Finland, for example, is only one third that of the United Kingdom and one fifth that of the United States.

Sweden, in particular, has attracted international attention for its radical policies, beginning in 1975 with a major review of the school sex-education curriculum. Recommendations of abstinence and sex-only-within-marriage were dropped, contraceptive education was made explicit, and a nation-wide network of youth clinics was established specifically to provide confidential contraceptive advice and free contraceptives to young people. In the same year, abortion law was reformed to allow termination of pregnancy on demand and without charge. Over the next two decades, Sweden saw its teenage birth rate fall by 80 per cent. According to a recent study published by the US based Population Council, this was the result of a pragmatic approach which sees teenage sexual activity *"neither as desirable nor undesirable, but as inevitable – this being the case, teenagers' use of contraceptives is viewed as highly desirable because it will prevent both childbearing and abortion."*[35]

Similarly pragmatic policies have been pursued by the other Nordic countries, and with similar results.

In 1998, the Family Planning Associations of Denmark, Norway, Sweden and Iceland attempted to distil the lessons from this experience into a 'Nordic Resolution', urging that young people should have the same rights to sexual and reproductive health care as

married couples, that they should have affordable and high quality sexual health services, including contraception, that they should have the right to confidentiality in discussing contraceptive services, and that they should be able to opt for abortion without needing parental consent.[36]

Opponents of the Dutch and Nordic approaches, operating from a different moral premise, argue that such policies send the wrong message to the young, pay no regard to moral welfare, encourage sexual activity at too early an age and of too casual a nature, and threaten to undermine the basic family values on which society ultimately depends. They may also argue that abortion represents the deliberate taking of a human life and is a moral wrong that cannot be justified on pragmatic grounds; that abstinence is the appropriate recommendation for adult society to make to the young; and that recent abstinence education campaigns are achieving some success (Box 6). They might also add that welfare provision for unmarried teenage mothers is an encouragement to irresponsible childbearing.

To this, the advocates of the Dutch or Nordic approaches might reply that their countries have the lowest teenage birth rates in the world, that there has been no

Emergency contraception

Emergency contraception, sometimes called the 'morning after pill', is essentially a high-dose of a regular oral contraceptive taken in the form of two pills taken 12 hours apart and within 72 hours of unprotected sex. It offers 95 per cent protection against pregnancy becoming established and is on sale over-the-counter in France, Norway, Portugal and the United Kingdom (and as of December 2000 has been licensed for use by prescription in all nations of the European Union except Greece and Ireland).

Its advocates believe that it is an invaluable 'last stay' against unwanted pregnancy and that it can drastically reduce the number of women seeking abortion. In the United States, where emergency contraception is not available without prescription, the President of the Planned Parenthood Federation of America has argued that *"this is a safe drug that could prevent more than a million and a half unintended pregnancies a year and reduce the number of abortions by about 800,000 if it were widely used."*

In France, emergency contraception has been sold over-the-counter since 1999 and was made available in schools in December of that year. In July 2000, the Supreme Court upheld the objections of protesters who argued that dispensing hormonal contraceptives without prescription was against the law. Six months later, in December 2000, parliament made emergency contraception legal again after a debate in which the French education minister described the policy as *"a gesture of help for those living in a painful moment of isolation and fear."*

In the United Kingdom, the government is trying to make emergency contraception more widely available and has licensed over-the-counter sales. The persistence of the name 'morning after pill' is unfortunate, says a government report, following a survey finding that fewer than half of 16 to 21 year-olds knew that there was a 72 hour 'window of opportunity' for emergency contraception.

Irresponsible

Opponents are equally fervent in condemning the promotion of emergency contraception to young people.

"Making the morning after pill available to all girls over 16 in this way sends the wrong message about the need for responsible sexual activity." says the United Kingdom's opposition spokesperson Dr. Liam Fox. *"It can only increase the risk of worsening the current epidemic of sexually transmitted diseases and could result in repeated and unsupervised exposure of young girls to this powerful drug."* (see Box 5)

The second accusation levelled at emergency contraception is that it is abortion by another name.

In Italy, where the emergency contraception pill Norlevo was licensed to be sold in pharmacies on prescription in September 2000, the health ministry has announced that use of the drug does not constitute abortion. Condemning the decision, the Vatican argued that *"blocking the implantation in the uterus is the same as suppressing it. Morally, it's the same thing as surgical abortion."* The Irish Medicines Board agreed, and has refused a license.

Supporters counter that emergency contraception actually prevents abortions by offering women an alternative. In the UK, 70 per cent of women seeking an abortion said that they would have used emergency contraception instead if they had known how to get it.

Source: see page 31

further fall in the average age at first sex for the last two decades,[37] that they have low and still declining abortion rates, and that the prevalence of AIDS and sexually transmitted infections has fallen sharply (as opposed to the rising levels of infection in other countries (Box 2)). They might also add that concerns over sending the wrong messages to young people about sex would be better directed towards the media and the advertising industry rather than towards parents, school and clinics attempting responsible sex education.

Such battles have characterized much recent discussion on teenage birth rates. But whereas there are some dimensions of the debate which might eventually be settled by the accumulating evidence (for example the potential of abstinence education and welfare reform to reduce teenage birth rates (Box 6)), the heart of the matter remains a conflict of premise and principle that is unlikely to be resolved by analysis of league tables.

Contraception the key

Overall, any examination of different levels of teenage births in the industrialized nations must conclude by re-emphasizing the central role played by contraception. Contraceptive behaviour may be strongly influenced by motivation; but it is through the ability to manage contraception successfully, often over an extended period of time, that motives, attitudes, and decisions find practical expression.

In particular, those countries that have been in the forefront of the socio-sexual revolution are today reliant on some combination of contraception and abortion to bridge an unprecedented gap between average age at first sex and average age at first birth. And what determines the position of such countries in the league table of teenage birth rates is not any significant difference in the

Finland: waking up to the pill

Opponents of 'morning after' contraception (Box 4) have argued that it will encourage irresponsible sexual activity and that there is a danger of what is essentially a high-dosage drug being used repeatedly by young people who come to rely on it as a substitute for conventional contraception.

To examine this proposal, researchers in Finland surveyed the use made of emergency contraception by teenagers since its introduction in the late 1980s. The results of the survey, involving over 20,000 Finnish girls in the mid 1990s, are shown in the two tables.

The study also compared the proportion of teenagers who were sexually experienced (13.3 per cent of 14 year-olds, 28.8 per cent of 15 year-olds, and 51.5 per cent of 17 year-olds) and found that there had been no significant change since the equivalent surveys in the late 1980s and early 1990s.

The study concluded: *"Emergency contraception has not become a contraceptive choice replacing conventional methods among adolescents. Our results suggest that easy access to contraceptive services (including emergency contraception) and intensive sex education have not increased adolescent sexual activity. The proportion of sexually experienced teenagers in our study was not higher than in Finnish studies in the late 1980s or early 1990s when emergency contraception was not widely used."*

Note: The school health care system in Finland advises teenagers on all aspects of sexual health, including emergency contraception.

Source: see page 31

Use of emergency contraception by teenagers in Finland

(percentage of teenage girls who had ever used emergency contraception)

Girls aged:	14	15	17	All ages
	%	%	%	%
% ever used	**2.1**	**6.3**	**15.1**	**6.6**
% never used	**93.6**	**91.5**	**83.5**	**90.5**
% not knowing what emergency contraception is	**4.3**	**2.2**	**1.4**	**2.9**
Total	**100.0**	**100.0**	**100.0**	**100.0**

Number of times emergency contraception used by teenage girls

Girls aged:	14	15	17	All ages
Once	**61.8**	**62.9**	**66.4**	**64.6**
Twice	**16.2**	**16.7**	**17.6**	**17.1**
Three or more	**6.4**	**4.3**	**4.9**	**4.9**
Missing data	**15.6**	**16.1**	**11.1**	**13.5**
Total	**100.0**	**100.0**	**100.0**	**100.0**

USA: why teen births are falling

The United States sits at the bottom of the league table of teen births – with a rate more than twice as high as most other industrialized countries. But its present level of teenage births represents a sharp drop from the peak years of the early 1990s. As this report goes to press, new figures (April 2001) show that the decline is continuing. A further 3 per cent fall has brought the teenage birth rate to 50.5 per 1,000 in 1999. This is still more than twice the European average, but it represents a fall over the 1990s of 20 per cent.

Since the good news began to filter through from the national statistics, the hunt has been on to identify the reasons for the decline and the policies that might sustain it. But it is a hunt that has tended to ride off in two different directions.

Abstinence

For some time, a significant section of public and political opinion in the United States has argued that sexual abstinence is the only appropriate sex-education message for unmarried teenagers. Contraceptive advice, the argument runs, carries the inevitable subtext that it's all right to start having sex. And since 1996, more than US$400 million in federal and state funds has been spent on 'abstinence only' campaigns in America's schools. Today, one in three US high schools has an abstinence-only policy on sex education.

At the same time, it has also been argued that welfare payments to unmarried mothers encourage teenage pregnancy. And since the mid 1990s different states have introduced new limits and conditions on benefits to unmarried mothers.

These specific campaigns and reforms took the field too late to be credited with the fall in teenage births in the first half of the 1990s.

But their supporters believe that the national debate on such issues had already changed the climate. And as the second half of the 1990s began and the teenage birth rates continued to fall, The Consortium of State Physicians Resource Councils pronounced that *"the evidence points to sexual abstinence, not increased contraceptive use, as the primary reason for the decline."*

Is abstinence increasing among US teenagers? According to two different surveys, the answer appears to be 'yes – slightly'.

The latest Youth Risk Behaviour Survey has found that the proportion of female high school students who report having had sex has declined from 51 to 48 per cent (1991 and 1997). And the National Survey of Family Growth finds that the proportion of all teenage girls who report having had sex has declined from 52.6 to 51.5 per cent between 1988 and 1995.

Contraception

Others have been quick to challenge these conclusions. The 1.3 percentage point decline in the proportion of all teenage girls who report having had sex is not statistically significant, say researchers at New York's Alan Guttmacher Institute. Furthermore, even the reported decline would only account for about 25 per cent of the decline in the teenage pregnancy rate (see Sources). Most of the fall, they argue, is attributable to a fall in the pregnancy rate among teenagers who do have sex. And as there appears to have been no change in the frequency of intercourse among sexually experienced teenagers, the decline can only have been caused by more or more effective contraception.

Summing up its inquiry into why teenage birth rates have fallen in the United States, the Alan Guttmacher Institute concluded: *"These findings suggest that the best strategy for continuing the declines in teenage pregnancy levels is a multi-faceted approach. Programs and policies should aim at encouraging teenagers – particularly those at the youngest ages – to postpone intercourse, and at supporting sexually experienced youths who wish to refrain from further sexual activity. At the same time, it must be recognized that most young people become sexually active during their teens, and sexuality education and information should also prepare them to adequately prevent pregnancy and sexually transmitted infection if and when they do have sex."*

America's parents seem to agree. Most want to see sex education in schools expanded and three-quarters say it should include contraceptive education.

As for the debate on welfare reform, the jury is still out. Stricter limits to benefits were introduced only in 1996 and it will be some time before their effects, if any, on teenage pregnancy rates can be analysed.

Standing back from these particular debates, teenage pregnancy rates in the United States, as in the rest of the industrialized world, are also influenced by a wide range of other factors including fear of HIV/AIDS and sexually transmitted infections, improvements in contraceptive technologies, and the state of the economy and of career prospects for young people.

Source: see page 32

number or age of teenagers involved in sexual activity but the level of effective contraception and the degree of recourse to abortion.

In France, for example, the proportion of under-eighteens who give birth has been more than halved in the last 20 years while the average age at first sex has remained stable for many years,[38] as has the number of abortions. This has only been made possible by an increase in contraceptive use and effectiveness. In 1970, for example, about 50 per cent of French women used no form of contraception at first sex. By 1993 that figure had declined to 16 per cent.[39] Similarly, it is not the difference in the average age at first sex or fewer abortions that gives the United Kingdom a higher rate of teenage births than other European nations but lower rates of contraceptive use (only about 50 per cent of under-sixteens and two thirds of 16 to 19 year-olds in the United Kingdom use contraception at first sex[40]).

The point may be made more graphically by imagining the effect of removing modern contraceptives from the scene altogether. In the United States alone, it has been estimated that this would result in a trebling in the annual number of teenage births from today's 494,000 to approximately 1,650,000. Even if teenagers responded to this unlikely scenario by having less frequent sex, or using rhythm or withdrawal methods, the decline in contraceptive use and effectiveness would result in an extra 1 million pregnancies, 400,000 abortions, and 120,000 miscarriages every year.[41] Arguments in favour of abstinence education must therefore take into account that the prevalence of sexual activity among US teenagers would have to decline by more than 80 per cent to prevent the same number of pregnancies as are today prevented by modern contraceptive methods.[42]

Finally, it should be noted that contraception is essentially in contention with abortion and that, all other things being equal, abortion tends to recede as contraception advances. In South Korea over the last 30 years, for example, total fertility has been reduced from 4.5 to 1.5 births per woman – largely by a combination of contraception and abortion. But while the percentage of Korean women aged 15 to 44 using contraception has risen from 25 per cent to almost 80 per cent over the period, the abortion rate has been more than halved.[43]

And with the rise in the use and effectiveness of contraception of recent decades, abortion rates are now stable or falling in most industrialized nations. From the mid-70s to the mid-90s abortion rates in Denmark, Finland, Italy, and Japan have dropped by 40 per cent to 50 per cent. Smaller but still substantial declines have been seen in France, Germany, and the United States. In most other developed nations, rates have been stable over the last 20 years.[44] Only Canada and New Zealand appear to be showing slight increases.

Conclusion

This commentary has stressed throughout that success in lowering teenage birth rates is a matter of both motivation and means.

The 'means' involve not only the degree of availability of contraception but also the kind of sex education which enables young people to make informed and mutually-respectful choices, including the choice to delay having sex or to insist on safe contraception. And the evidence from countries that have already achieved low rates of teenage birth suggests that it ought to be within the power of all governments in the developed world to ensure that sex education of this kind is available to all their young people within the relatively short term.

Motivation is a less tractable issue. In the main, the incentive to avoid early parenthood stems from a stake in the future, a sense of hope, and an expectation of inclusion in the benefits of living in an economically advanced society. Building that sense of inclusion where it is now absent is a task that requires action on a much broader front. Such action, however, is required not only to reduce teenage births but for its own sake – and for the sake of attempting to resolve at a fundamental level many of the other major problems that confront today's industrial societies and that are the subject of the *Report Card* series. □

Notes

1 The weighted average, or total teenage birth rate, for the European Union is 13.3 per 1,000 – about a quarter of the US figure of 52.1 as given in ***Figure 1***.

2 The 'Nordic approach' refers to The Nordic Resolution on adolescent sexual health and rights, drawn up by associations working in the field of sexual and reproductive health in Denmark, Iceland, Finland, Norway, and Sweden, Helsinki, October, 1998. Full text available at www.sexogsamfund.dk/uk_sider/nordisk%20reso.html. Further discussion on use of The Nordic Resolution found in news item, IPPF, 26 March 1999, New York, available at www.ippf.org.

3 H. Boonstra, 'Welfare Law and the Drive to Reduce "Illegitimacy"', *The Guttmacher Report on Public Policy*, The Alan Guttmacher Institute, New York, December 2000.

4 These figures refer to the (unweighted) average values of the total fertility rates for OECD countries (excluding Mexico and Turkey) calculated from data drawn from the sources cited in Box 3 for 1998 and from Eurostat, *Demographic statistics – Data 1960-99*, Luxembourg 1999 (pp.102-3) except Australia, Canada, Czech Republic, Hungary, Japan, Korea, Poland, New Zealand, USA from United Nations, *Demographic Yearbook Historical Supplement 1948-1997*, 2000; the Slovak Republic from UNDP, *Slovak Republic – Human Development Report 1995* (1996) for 1970.

5 The percentage of children born outside marriage in the US has increased from 4 per cent in 1940 to 33 per cent in 1995. H. Boonstra, 'Welfare Law and the Drive to Reduce "Illegitimacy"', *The Guttmacher Report on Public Policy*, The Alan Guttmacher Institute, New York, December 2000, (chart p.8).

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Figure 1. Data for European countries are from Eurostat, *NEW CRONOS Demographic database 2000*. Data for other countries are as follows: USA from S. Ventura, J. Martin, S. Curtin, T. Mathews, M. Park, *Births: Final data for 1998*, National Vital Statistics Reports 48(3), National Center for Health Statistics, Hyattsville, Maryland, 2000 (pp 25 and 93); Canada from Statistics Canada, *Health Statistics at a Glance, 1999*; Australia from Australian Bureau of Statistics, Cat. 3301.0, *Births 1999*, 2000; the Slovak Republic from Statistical Office of the Slovak Republic; Japan from Statistics and Information Department, Ministry of Health and Welfare and from Statistics Bureau, Management and Coordination Agency, Government of Japan, *Japan Statistical Yearbook 2000*; New Zealand from Demography Division, Statistics New Zealand; Belgium from National Institute for Statistics; Korea from National Statistical Office, Republic of Korea.

Data refer to 1998 except: Canada, France, Spain (1997), Italy (1996), Belgium (1995). Data for Netherlands are for 1998 except for the number of births to women aged less than 16 which is for 1994. Data for Japan are for 1998 except for the number of births to women aged less than 15 which is for 1997. (Data for Japan refer to Japanese nationals in Japan only.)

Age refers to age of mother at birth of the child (age in full years at the time of the event). In Germany, age of mother is reported as the age that the woman will attain during the calendar year in which the birth occurred (which is equal to the difference between the year of birth of the child and the year of birth of the mother). To ensure comparability, the data for Germany were multiplied by 1.34, which is the average ratio of teenage birth rates based on the two different age definitions across other European countries for which rates on both bases are available.

The two OECD countries not included in the table are Mexico and Turkey. Both have total fertility rates that are above the 'replacement' level for any country's population, conventionally taken as 2.1. The total fertility rate measures the number of children that a woman can be expected to give birth to in her lifetime given prevailing age-specific birth rates. The replacement level of total fertility is the level required for a country's population to stay constant (ignoring migration). The World Health Organisation estimates total fertility to have been 2.8 in Mexico in 1998 and 2.5 in Turkey (*The World Health Report 1999*, Annex Table 2). Mexico's teenage birth rate was 85.2 in 1995 and 92.1 in 1970 while Turkey's rate was 50.0 in 1997 and 81.1 in 1967 (United Nations, *Demographic Yearbook 1997*, 1999). This source labels the 1995 Mexico rate as 'unreliable' and the 1997 Turkey rate as 'provisional'.

Figure 2. The years to which data refer are as in ***Figure 1*** and the sources are also the same, except for the USA

(National Center for Health Statistics *Variations in Teenage Birth Rates, 1991-98: National State Trends*, National Vital Statistics Reports 48(6)). Total teen births in Germany have been estimated by multiplying the reported figure (21,668) by 1.34 (see the note on German data in ***Figure 1***). The OECD total including Mexico and Turkey would be 1,347,936. This draws on data for Mexico (1998) and Turkey (1997) given in Instituto Nacional de Estadística, Geografía e Informática, *Indicadores Sociodemográficos de México (1930-2000)* (p.46) and UN *Demographic Yearbook Historical Supplement 1948-1997*, 2000.

The estimated percentage of 20 year-olds who gave birth in their teens was calculated in two steps. First, birth rates (expressed as percentages) were summed for women aged 15 in 1994, 16 in 1995, 17 in 1996, 18 in 1997 and 19 in 1998. Different years were used for some countries: France – 1993 for births to 15 year-olds, 1996 for 16/17 year-olds, 1997 for 18/19 year-olds; Germany – 1996 for 15 to 17 year-olds (multiplied by 1.34 to correct for different age definition); Italy – 1996 for ages 17 to 19; Spain – 1997 for ages 18/19; Switzerland – 1998 for ages 18/19. For Australia, Canada, Japan, Korea, Poland, New Zealand and the USA, the sum of the teenage birth rates from 1994 to 1998 was taken (Canada – 1997 instead of 1998, Japan and Poland – 1997 rate estimated from 1996 and 1998, Korea – 1996/97 rates estimated from 1995 and 1998). For Belgium and the Slovak Republic, the teenage birth rate for 1995 and 1998 respectively was multiplied by five.

Second, to take into account repeat teen births (the possibility of a teenager having more than one child), these percentages where reduced by one-eighth (the rate of repeat births in the UK), except for the US where the reduction was one-fifth. The incidence of repeat teen births is given for the UK in Social Exclusion Unit, *Teenage Pregnancy*, The Stationery Office, June 1999 (p.12 which cites K. Wellings et al, *Teenage sexuality, fertility and life chances*, report prepared for the Department of Health using data from the National Survey of Sexual Attitudes and Lifestyles, 1996) and for the US in C. Dailard, 'Reviving Interest in Policies and Programs to Help Teens Prevent Repeat Births', *The Guttmacher Report on Public Policy*, III (3), The Alan Guttmacher Institute, June 2000).

Figure 3. Sources are as ***Figure 1*** except Australia (Australian Bureau of Statistics, Cat. 4119.0.00.001, *Australia's Children (2000)* for ages 15 to 17 and S. Singh and J. Darroch 'Adolescent pregnancy and childbearing: levels and trends in developed countries', *Family Planning Perspectives* 2000, 32(1): 14-23 for ages 18 to 19), Belgium (Eurostat, *NEW CRONOS Demographic database 2000*) and Canada (Statistics Canada, *Annual Demographic Statistics 1999*, 2000 (pp. 49 and 179)). Data refer to the same years as for ***Figure 1***. Data for 18 to 19 year-olds were available only for 1994 in Australia and rates were adjusted proportionally to a 1998 basis in line with movements in the birth rates for all women aged below 20 in the two years. Because of a difference in reporting of age (see note on German data in ***Figure 1***), data for Germany were multiplied by 1.55 (age 15 to 17) and 1.31 (age 18 to 19). Data are missing for Korea. Note that for all countries, births to women aged under 15 are not included in ***Figure 3*** (whilst they are in ***Figure 1***).

Figure 4 draws on United Nations Population Division, *Global Population Policy Database, 1999* (2000).

Figures 5 and ***6*** are based on analysis of data from the European Community Household Panel (ECHP), 1996 (wave 3), undertaken for the UNICEF Innocenti Research Centre by Richard Berthoud and Karen Robson of the Institute for Social and Economic Research (ISER), University of Essex, UK. The sample analysed is of women who had their first (or only) child aged 15 to 19 or 20 to 29, and whose oldest child still living with them was aged less than 16. The women were interviewed for the ECHP an average of eight years after their first child was born. The sample of former teenage mothers ranges from 32 women in the Netherlands to 223 in Greece, with an average size of 103. (The sample size in Luxembourg was too small for this country to be included in the analysis.) The size of the samples of mothers who gave birth for the first time aged 20 to 29 is much larger, an average of 763 women per country. Household income is equivalised by the OECD scale. Further details of the analysis (including results that allow for differences in the current age of former teen mothers and of other mothers) are contained in R. Berthoud and K. Robson, 'The Outcomes of Teenage Motherhood in Europe', Innocenti Working Paper 86, available from the UNICEF Innocenti Research Centre website http://www.unicef-icdc.org. The paper is also available as a Working Paper of the European Panel Analysis Group at ISER, University of Essex (see http://www.iser.essex.ac.uk).

Figure 7. Council of Europe, *Recent Demographic Developments in Europe 2000* (p.77), except Canada from Statistics Canada, USA from National Centre for Health Statistics, Australia from Australia Bureau of Statistics, *3301.0 Births, Australia 1999* (p.38), Japan from Ministry of Health and Welfare, Korea from National Statistical Office. NB Australia: '1985' is 1986, '1990' is 1993, '1995' is 1996; Korea '1985' is 1987.

Figure 8. Eurostat, *NEW CRONOS Demographic database 2000*, except Australia, Canada, Hungary, Germany, Ireland, Japan, New Zealand, Poland, Portugal, Spain, UK, USA from UN *Demographic Yearbook Historical Supplement 1948-1997*, 2000, the Slovak Republic from the Statistical Office of the Slovak Republic,

and Korea from National Statistical Office, Republic of Korea, *Statistical Yearbook 1997* (p.70). Data for 1970 differ from those for 1998 as follows: data are tabulated by year of registration rather than occurrence in Australia, New Zealand, Ireland; Canadian data do not include Newfoundland; UK data refer to Great Britain (i.e. they exclude Northern Ireland) and a weighted average has been taken for England and Wales (weight equals 0.9) and Scotland (weight equals 0.1). Data for Germany are a weighted average of figures for the Federal Republic of Germany (weight equals 0.75, data multiplied by 1.34 to adjust for differences in age reporting – see note on German data in ***Figure 1***) and Former German Democratic Republic (weight equals 0.25).

Figure 9. Eurostat, *NEW CRONOS Demographic database 2000*, except USA from National Center for Health Statistics, *Variations in Teenage Birth Rates, 1991-98: National State Trends*, National Vital Statistics Reports 48(6), Australia from Australian Bureau of Statistics, *3301.0 Births*, 1999 (p.31), New Zealand from Demography Division, Statistics New Zealand, Canada from Statistics Canada. Japan from Statistics and Information Department, Ministry of Health and Welfare, the Slovak Republic from the Statistical Office of the Slovak Republic. Data are missing for Korea. Data for teenagers for Canada and Japan refer to women aged 15 to 19. The years to which data refer are as in ***Figure 1***. Because of difference in age reporting (see notes to ***Figure 1***), data for teenagers in Germany were multiplied by 0.94.

Figure 10. France, Germany, Poland, UK and the USA: *Into a New World: Young Women's Sexual and Reproductive Lives*, The Alan Guttmacher Institute, New York, 1998, Appendix Table 3, cols. 7–10 (data for the UK are for Great Britain). All others: M. Bozon and O. Kontula, 'Initiation sexuelle et genre: comparaison des évolutions de douze pays européens', *Population*, 1997, 52 (6):1367–1400, Table 2. (Data compiled and cited in *Sharing Responsibility: Women, Society and Abortion Worldwide*, The Alan Guttmacher Institute, 1999.) Data come largely from national surveys on sexual attitudes and lifestyles conducted between 1989 and 1993.

Figure 11. The data on income inequality refer to the distribution by individuals of per capita household income and come from various sources: European Community Household Panel (ECHP) microdata for wave 3 (Greece, Ireland, Portugal), J. Flemming and J. Micklewright, 'Income Distribution, Economic Systems and Transition', Innocenti Occasional Paper No. 70, 1999 (Czech Republic), UNICEF Innocenti Research Centre MONEE project (Hungary, Poland, the Slovak Republic), UN WIDER World Income Inequality Database (New Zealand), and Luxembourg Income Study (LIS) microdata (all other countries). The years to which the data refer are 1998 for Hungary, Poland, the Slovak Republic, 1997 for New Zealand and USA, 1996 for Belgium, Czech Republic, Greece, Ireland, Korea and Portugal, 1995 for Austria, Canada, Finland, Italy, Norway, Sweden and the UK, 1994 for Australia, France, Germany, Luxembourg and the Netherlands, 1992 for Denmark, Japan and Switzerland and 1990 for Spain. The shading for Iceland assumes income inequality at the level of the OECD average. Shadings for Japan and Korea have been assigned on the basis of values given in D. Jacobs, 'Low inequality with low redistribution? An analysis of income distribution in Japan, South Korea and Taiwan compared to Britain', Centre for Analysis of Social Exclusion CASEpaper 33, London School of Economics, 2000 (***Figure 1***).

Data on the percentage of 15 to 19 year olds not in education are taken from OECD, *Education at a Glance – OECD Indicators*, 2000 edition (p.135). Belgium refers to the Flemish community only. The shading for Japan is estimated from the results of a linear regression for other OECD countries of the percentage of 15 to 19 year olds not in education on the upper limit of the age range in which over 90 per cent of the population are enrolled (data drawn from the same OECD source). The shading for Luxembourg assumes a value equal to the average for contiguous countries (Belgium, Germany, France) and that for the Slovak Republic assumes a value equal to that for the Czech Republic.

Figure 12 draws on J. Hobcraft and K. Kiernan 'Childhood Poverty, Early Motherhood, and Adult Social Exclusion', Centre for Analysis of Social Exclusion CASEpaper 28, London School of Economics, 1999 (Table 9) cited in Social Exclusion Unit, *Teenage Pregnancy*, The Stationery Office, June 1999, which notes 'The analyses of the effects of teenage motherhood and of childhood poverty on adverse adult outcomes are drawn from logistic regression models, which control for both of these factors and for a wide range of other potential childhood factors, including family type, contact with the police, father's and mother's interest in schooling, mother's and father's school leaving age, parental housing tenure, grandfathers' and father's social class, personality attributes (aggression, anxiety, and restlessness), and test scores'.

Figure 13. The source for abortion data is Health For All Statistical Database 2000, WHO Regional Office for Europe, Copenhagen. Exceptions are France (Institut National d'études démographiques), Greece and Hungary (Eurostat, *NEW CRONOS Demographic database 2000*), Japan and the Netherlands (United Nations, *Demographic Yearbook 1997*, 1999), Australia (*Sharing Responsibility: Women, Society & Abortion Worldwide*,

The Alan Guttmacher Institute, 1999), Canada (Statistics Canada, *Health Statistics at a Glance, 1999*), New Zealand (Demography Division, Statistics New Zealand), and the USA (The Alan Guttmacher Institute, *US Teenage Pregnancy Statistics: With Comparative Statistics for Women Aged 20-24*, 1999). The data refer to 1996 except for Australia (1995-96), Belgium (1995), and the Netherlands (1992). NB the birth rates in the figure refer to the same year as abortion rates, so they do not correspond with the rates in the main league table. Data for Japan refer to Japanese nationals in Japan only. For abortions in France, age of mother is reported as the age that the woman would attain during the calendar year in which the abortion occurred. The abortion rate has been multiplied by 1.36 to correct for this (the ratio of teenage birth rates in France in 1996 according to the two age definitions, age at birth and age attained during the year of birth). Data are missing for Austria, Ireland, Korea, Luxembourg, Poland, Portugal, Switzerland.

Since abortions occur well before birth would have occurred the data include abortions undergone by teenagers who would have turned 20 years old when giving birth were they not to have aborted. Note also that abortions may be underreported, especially in countries with restrictve abortion laws, and that national statistics often contain figures for abortions for non-nationals who travel outside their own country for abortion when it is not readily available at home (e.g. from Ireland to the UK). (National statistics for women of all ages in France, Italy, Japan and Spain have been judged to be more than 20 per cent incomplete - see A.Bankole, S.Singh, T.Haas, 'Characteristics of women who obtain induced abortion: A worldwide review', *International Family Planning Perspectives* 25(2) 1999.

Box 1
Race and place

Data for the United Kingdom are from: R. Berthoud, 'Teenage births to ethnic minority women', *Population Trends* 104, Office for National Statistics, The Stationary Office, London, June 2001. The data are based on the Labour Force Survey of 13 consecutive years (1987-99), and refer to women aged up to 30 who had had a child in their teens. The peak years for observations were in the mid 1980s. Data for all other countries in this box refer to 1998. Data for the United States are from: S. Ventura, J. Martin, S. Curtin, T. Mathews, M. Park, *Births: Final data for 1998*, National Vital Statistics Reports 48(3), National Center for Health Statistics, Hyattsville, Maryland, 2000. Data for the Netherlands are from: NISSO Fact Sheet, *Teenage mothers in the Netherlands*, Utrecht, April 2000, compiled by E. Evenhuis, available at http://www.nisso.nl/nfactstiene.htm. Data for New Zealand are from Demography Division, Statistics New Zealand, *Demographic Trends 2000* (2001). Data for Italy are from ISTAT, *Nascite: caratteristiche demografiche e sociali. Anno 1996*, 2000; ISTAT, *Popolazione e movimento anagrafico dei comuni, Anno 1995*, 1997; ISTAT, *Popolazione e movimento anagrafico dei comuni, Anno 1996*, 1998. Data for Canada are from Statistics Canada, *Annual Demographic Statistics 1999*, (2000) p.180.

Box 2
Sexual Health

Discussion of teenagers as victims of unwanted sex in the US draws on K. A. Moore et al., 'A statistical portrait of adolescent sex, contraception, and childbearing', National Campaign to Prevent Teen Pregnancy, Washington D. C., 1998 and cited in Facts in Brief: Teen Sex and Pregnancy, Revised 9/1999, The Alan Guttmacher Institute available at (http://www.agi-usa.org/pubs/fb_teen_sex.html). Roger Ingham discusses value systems in sex education in R. Ingham, 'Education and debate: For and against – Doctors should advise adolescents to abstain from sex', *British Medical Journal*, Volume 321, 16 December 2000, UK. Data on the fall in sexually transmitted diseases (STDs) in Sweden are drawn from The Nordic Resolution on adolescent sexual health and rights, drawn up by associations working in the field of sexual and reproductive health in Denmark, Iceland, Finland, Norway, and Sweden, Helsinki, October 1998, available from www.sexogsamfund.dk/uk_sider/nordisk%20reso.html. Data on STDs among British teenagers are drawn from Social Exclusion Unit, *Teenage Pregnancy*, The Stationery Office Ltd, June 1999, (p. 49). Information on use of contraception among US teenagers is drawn from 'National Survey of Teens on Dating, Intimacy, and Sexual Experiences', conducted for the Henry J. Kaiser Family Foundation, California, and YM Magazine by Princeton Survey Research Associates, 1998. The chances of contracting HIV and other STDs are taken from Social Exclusion Unit, ibid (page 6).

Box 3

Teen births versus overall fertility

The 'expected' teenage birth rates are the predicted values from the results of a linear regression for the teenage birth rate on total fertility: slope parameter = 19.1 (t-statistic = 2.6), constant = –14.1 (t-statistic = –1.2), R2 = 0.20. The source for the data on total fertility is Eurostat, *Statistics in Focus* (theme 3 - 10/2000) except Australia from Australian Bureau of Statistics, 3301.0 Births, 1998, Canada from Statistics Canada, Japan from *Japan Statistical Yearbook 2000*, New Zealand from Demography Division, Statistics New Zealand, Belgium from Eurostat, *Demographic Statistics - Data 1960-99*, (p.102) and Korea (calculated from fertility rates of 5-year age groups) from National Statistical Office, Republic of Korea, *Statistical Yearbook 1999* (p.124). The years to which the data relate are the same as for ***Figure 1***. (Total fertility data are provisional for Belgium, France, Italy, Spain.)

Box 4

Emergency Contraception

Information on licensing of the 'morning after pill' in the European Union is given in the *British Medical Journal*, Volume 321, 25 November 2000 (p.1306). The statement by the President of the Planned Parenthood Federation of America, New York (Gloria Feld) is available at www.ippf.org (statement made December 5, 2000). The statement by the French education minister (Ségolène Royal) is taken from H. Boonstra, 'Promoting contraceptive use and choice: France's approach to teenage pregnancy and abortion', *The Guttmacher Report on Public Policy*, vol. 3, no. 3, The Alan Guttmacher Institute, June 2000. Dr. Liam Fox, UK opposition spokesperson at the time this *Report Card* goes to press, is quoted in an article 'Quietly, Britain Eases Access to Morning-After Contraception', *International Herald Tribune*, January 16, 2001. The Vatican comment on emergency contraception is found in the Kaiser Daily Reproductive Health Report, 1 October 2000, cited in news item from the International Planned Parenthood Federation available at www.IPPF.org. The Irish Medicines Board's decision to refuse a licence for emergency contraception pill is cited in the *British Medical Journal*, Volume 321, 25 November 2000 (p.1306). Discussion of whether or not emergency contraception may prevent abortion in the UK can be found in Social Exclusion Unit, *Teenage Pregnancy*, The Stationery Office Ltd, June 1999, (page 54).

Box 5

Finland: waking up to the pill

The discussion and tables draw on E. Kosunen, A. Vikat, M. Rimpelä, H. Huhtala, 'Questionnaire study of use of emergency contraception among teenagers', *British Medical Journal*, Volume 319, 10 July 1999.

Box 6

USA: why teen births are falling

The 1999 US teenage birth rate of 50.5 per 1,000 is calculated from information in S. Ventura, J. Martin, S. Curtin, F. Menacker, B. Hamilton, *Births: Final data for 1999*, National Vital Statistics Reports vol. 49 no. 3. Hyattsville, Maryland: National Center for Health Statistics, 2001. The fall during the 1990s (20 per cent) is the percentage change over 1991-99, while the 3 per cent fall is the percentage change from 1998 (the year to which the US data refer in ***Figure 1***). The value of 50.5 differs from the published rate of 49.6 cited in the National Vital Statistics Report since it includes births to women aged under 15 (as in ***Figure 1***). (The 49.6 rate relates to births to15 to 19 year-olds rather than to all women aged under 20.) Discussion of abstinence-only policy on sex education in US schools draws on H. Boonstra, 'Welfare Law and ' the Drive to Reduce 'Illegitimacy'', *The Guttmacher Report on Public Policy*, The Alan Guttmacher Institute, New York, December 2000, and C. Dailard, 'Sex Education: Politicians, Parents, Teachers and Teens', *The Guttmacher Report on Public Policy*, The Alan Guttmacher Institute, New York, February 2001. The quotation from The Consortium of State Physicians Resource Councils is taken from J.M. Jones, et al. (1999), 'The Declines in Adolescent Pregnancy, Birth and Abortion Rates in the 1990s: What Factors Are Responsible?' N.p.: The Consortium of State Physicians Resource Councils.

The data on abstinence from the Youth Risk Behaviour Survey and the National Survey of Family Growth and the discussion of frequency of intercourse among sexually experienced teenagers come from J. Darroch and S. Singh, 'Why is teenage pregnancy declining? The roles of abstinence, sexual activity and contraceptive use', Occasional Report No. 1, The Alan Guttmacher Institute, New York, December 1999. (This is also the source of the quotation on The Alan Guttmacher Institute's findings.)

Their conclusion that most of the fall in teenage pregnancy (both pregnancies that lead to births and pregnancies that end in abortion) is attributable to a fall in the pregnancy rate among teenagers who do have sex is based on the following argument. The teen pregnancy rate for 1988 (111.4) combined with the proportion of teenagers sexually active in that year (52.6 per cent) yields a pregnancy rate among sexually active teenagers of 211.8 per 1,000 (111.4/0.526). By 1995, the overall teenage pregnancy rate had fallen to 101.1 per 1,000 and the proportion of sexually active teenagers had reportedly fallen to 51.3 per cent, yielding a pregnancy rate among sexually active teenagers of 197.1 (101.1/0.513). But if the pregnancy rate among sexually experienced teenagers had remained at the 1988 level of 211.8 per 1,000 then the lower proportion of sexually active teenagers in 1995 would have produced an overall teenage pregnancy rate of 108.7 (0.513 times 211.8). This represents a decline of 2.7 per 1,000 – as opposed to the actual decline in the teenage pregnancy rate of 10.3 per 1,000. Therefore only about a quarter of the decline in teenage pregnancy can be attributed to a fall in the proportion of sexually experienced teenagers.

Information on the views of parents on sex education in schools was taken from R. Saul, 'Teen Pregnancy: Progress meets politics', *The Guttmacher Report on Public Policy*, Vol. 2, No. 3, The Alan Guttmacher Institute, New York, June 1999.

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